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**The Effects of Score Study on Novices' Conducting and
Rehearsal Behaviors**

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and Rehearsal Behaviors**

by

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Dedication

I would like to dedicate this dissertation to my family, who always supported my intellectual development. Their support and love are greatly appreciated.

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The Effects of Score Study on Novices' Conducting and Rehearsal Behaviors

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This study investigated the effects of score study on novice conductors' nonverbal and verbal conducting behaviors. Presented with a brief musical excerpt of which they had no prior knowledge, undergraduate conducting students ($N = 11$) conducted and rehearsed a live brass quartet. After an initial conducting session, participants in the experimental group ($n = 6$) received two individual 30-minute score study tutorials, while the control group ($n = 5$) received no assistance. All participants returned one week after the first conducting session to conduct and rehearse the ensemble for a second time. Brass quartet members and three experienced conductors, all whom were blind to the experimental condition, evaluated participants' conducting in terms of eye contact, facial expression, effective gesture, ability to lead toward a musically accurate performance, knowledge of the score, and pacing.

Significant differences were found between the score study and control conditions. The brass quartet members' ratings for eye contact and knowledge of the score were higher for the participants who studied the score. I found no significant differences between conditions in the ratings given by experienced conductors.

At the conclusion of the second rehearsal, brass quartet members accurately identified five of the six conductors who had received score study assistance and four of the five conductors who had not. Experienced conductors were asked to identify the order of the two videos of each conductor. They accurately identified the order of five of the six score study conductors' videos. Identifications of participants' videos in the control group were mostly inaccurate and reflected much disagreement among the experienced conductors.

In reviews of the participants' written and verbal responses about their experience and the comments provided by brass quartet members and experienced conductors, I noted three characteristics that distinguished those who engaged in score study from those who had not: (1) more meaningful, instrument-specific eye contact; (2) greater confidence and comfort; and (3) more effective gestures and other nonverbal behaviors in rehearsal, all of which seemed to result from a more clearly defined interpretation of the music.

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I. INTRODUCTION

Yes, ironically, [conducting] is considered by most people — including, alas, most orchestra musicians — to be either an easy-to-acquire skill (musicians) or the result of some magical, unfathomable, inexplicable God-given gifts (audience). It is actually neither, [sic] the skills required in conducting at the highest artistic levels being anything but easy to acquire — many conductors never achieve them at all — while what the public mostly perceives as magic and majesty of the baton is, but only in the best hands, a result of many years of intensive study and hard work, as well as talent, of course (Schuller, 1997, p. 3).

For some, such as the musicians described above, conducting might indeed seem like an enterprise that is not terribly difficult: start the musicians, wave your arms for the duration of the piece, and stop the musicians. But careful observation of the multitude of skills and knowledge necessary for a conductor to lead and rehearse a group of musicians belies this misguided notion. Through nonverbal and verbal means, conductors transmit musical ideas such as phrasing, dynamics, balance, blend, and emotion to the musicians under their guidance. Subtle differences in how conductors convey musical ideas can lead to strikingly different results, even with the same group of musicians.

The complex nature of conducting makes it extremely difficult to master. The sheer number of component skills that are necessary for a beginning conductor may seem overwhelming to faculty members who have, on average, two semesters to train undergraduate conductors. It is not surprising that data collected from university conducting faculty indicate that time constraints and core music skills that are not adequately developed in other classes are often blamed for undergraduates not acquiring

all necessary conducting skills (Romines, 2003). Additionally, a survey of conducting faculty found widespread disagreement on what the content and sequence of instruction should be for undergraduate conducting courses (Manfredo, 2008).

The handbook of the National Association of Schools of Music, the organization that governs the accreditation of music schools, states: “The prospective music teacher must be a competent conductor, able to create accurate and musically expressive performances with various types of performing groups and in general classroom situations” (NASM, 2007, pg. 94). It is interesting to note that schools require prospective music teachers to enroll in several semesters of music theory, music history, and sight singing, in addition to extensive study of an instrument or voice. Yet, these students typically enroll in one or two conducting courses. Teaching future teachers the skills necessary for their professional careers in such a short amount of time is a daunting task, even for the most skilled conducting teachers.

The majority of beginning instrumental conducting texts focus on the acquisition of physical and technical skills (Juslin & Persson, 2002) such as patterns, cuing, and left hand independence, often failing to adequately introduce novices to the idea that a conductor must demonstrate far more than a steady tempo with the appropriately measured gesture. Technical skills are viewed as easier to teach and learn than musical expression, which is often viewed as instinctive (Sloboda, 1996). Expressive performance is both difficult to evaluate (Bergee, 2003) and define (Broomhead, 2001). It stands to reason that conducting teachers would also have difficulty demonstrating the finer points of expressive conducting to novices who are overwhelmed by the technical aspects of

conducting. Nonetheless, this underdeveloped aspect of novices' conducting plays prominently in perceptions of expert conductors' effectiveness and ratings of ensemble performance.

Conductors' expressive gestures have been shown to influence the expressivity of ensemble performance (Grechesky, 1985; Sidoti, 1990) and perceptions of conductor effectiveness (Byo & Austin, 1994; Frederickson, Johnson, & Robinson, 1998; Laib, 1993; Morrison, Price, Geiger, & Cornacchio, 2008; Price & Winter, 1991). Expert conductors consistently demonstrate expressive gestures, varied facial expression, and frequent eye contact (Yarbrough, 1975). Given that experts are expressive conductors, the goal of novice conductors should be to develop similar expressivity in their own conducting. What might inform expert conductors' expressivity in performance?

Expert conductors engage in a systematic process of score study that leads to a clear internal sound image of the piece they are going to conduct and rehearse (Battisti & Garafolo, 1990; Bergee, 2005; Schuller, 1997; Worthy, 2006). The idea that score study is an essential activity and needs to take place prior to conducting an ensemble for the first time is a nearly universal belief. The deep familiarity that is gained from studying the music provides the basis for gesture, musical interpretation, and rehearsal planning. Speaking to his belief that conductors should have a clear image of the piece, famed composer Igor Stravinsky once said, "A good conductor is one who has the score in his head, and not his head in the score" (quoted by Ripley, 2003, p. 85).

Even though expert conductors attribute much of their conducting success to time spent studying the music, they differ in their score study approaches (Ellis, 1994). For

example, Elizabeth Green, one of the most influential conducting pedagogues of the 20th century and author of *The Modern Conductor*, advocated a painstakingly detailed method of marking the score with highlighters and colored pencils.

Some of the most common approaches to score study include listening to model recordings, performing musical lines on a keyboard instrument, and marking the score. However, some of these methods are viewed with skepticism by conducting teachers. For instance, a commonly-held belief among many conducting teachers is that listening to a model recording of a piece of music might inadvertently influence a conductor to adopt that interpretation rather than developing one that comes from his own personal understanding of the music (Hallam, 1998). Irrespective of the methodologies that are utilized by expert conductors, one thing is certain: Expert conductors study their music at great length.

Even though interviews with expert conductors reveal their belief that score study is an essential component of conductor preparation, score study is often given little emphasis in undergraduate conducting texts. A content analysis of four texts commonly used in undergraduate conducting courses (Greene, 1981; Hunsberger & Ernst, 1997; Labuta, 1995; Rudolf, 1993) showed that topics related to score study were not well represented (Lane, 2002a). In many cases, these conducting texts indicate only *what* musical information should be learned (e.g., meter, tempo, instrument entrances) not *why* or *how* this information might be beneficial.

Ideally, knowledge of the score helps accomplished conductors develop a personal musical interpretation that guides many aspects of their nonverbal and verbal

conducting behaviors. Although many accept this as the result of score study, this appears to be at odds with what novices actually learn and are expected to demonstrate in their conducting courses. There is often no incentive or reason for novices to develop a clear, expressive message about the music they conduct in class.

It has been my personal experience in teaching and observing undergraduate conductors that too many are satisfied with simply getting the ensemble to stop and start together, conducting the correct pattern, and pointing at people when they are supposed to play. The simplicity of this conducting approach fails to address the most important aspect of music: its expressivity. The problem is exacerbated by the sequence of conducting curricula in which students oftentimes learn the nonverbal mechanics of conducting during the first semester and then concentrate on the task of verbalizing and rehearsing in the second semester. While these conducting and rehearsal skills are fundamental to conducting, they are only the necessary prerequisites for the much more challenging task of transmitting an expressive message to a group of musicians.

Perhaps because of the lack of instructional time afforded to conducting teachers, students are sometimes allowed to conduct their peers before they demonstrate a deep knowledge of the music they conduct. Conducting teachers expect and demand that students learn the music on their own time. Without guidance on *how* to study the score and the explicit knowledge about the goals of score study (i.e., a clear image of the piece and a personal interpretation), it is not surprising that novices rarely possess a great understanding of the music that may benefit their conducting and rehearsing.

While much has been made of experts' command of the score and the effect this knowledge has on their conducting and rehearsing, little is known about novices' approach to score study or how introducing specific musical tasks during the process might influence their thinking and subsequent conducting. When one considers the number of *a priori* musical decisions that are part of an informed interpretation, it is surprising that no research has attempted to examine the relationship between score study, specific verbal and nonverbal conducting behaviors, and conductor effectiveness.

In a preliminary investigation of the topic of score study and conductor effectiveness, I sought to determine whether the knowledge gained through score study would positively affect novice conductors' nonverbal conducting behaviors (Silvey, 2008). Students enrolled in two beginning conducting courses ($N = 17$) were randomly assigned to two groups each of which received a treatment at a different time of the semester. Each course was designed around four conducting exams, or rounds, during which the students conducted a brief musical excerpt. I used Round 1 as a pretest. During Round 2, group 1 ($n = 9$) received outside of class score study training and group 2 ($n = 8$) received no assistance. During Round 3, the treatment was reversed and group 2 received outside of class score study training and group 1 received no assistance. Round 4 served as a transfer posttest. Each of the four conducting rounds was videotaped for subsequent evaluation.

Two doctoral students in the wind band conducting program at The University of Texas at Austin served as the evaluators, rating participants' conducting in terms of posture, facial expression, eye contact, conductor confidence (i.e., the perceived amount

of confidence the evaluator would have performing under the direction of the conductor), and overall conductor effectiveness. A series of one-way analysis of variance tests (ANOVA) revealed no significant differences in any of the five areas between the two groups' conducting behaviors in conducting Round 1. Thus, the groups were deemed comparable in terms of conducting behaviors prior to the treatment.

Group 1 was chosen as the experimental group for conducting Round 2. Students in this group participated in three, 20-minute investigator-led score study sessions that took place outside the class time and before the conducting Round 2 exam. During these sessions, students marked their music, listened to model recordings, and sang individual lines from the music. Students in group 2 received no such assistance.

The same sequence was followed for conducting Round 3, except that group 2 received the score study assistance while group 1 received no help. In conducting Round 4, neither of the groups received score study assistance. Participants were asked to provide comments about their own conducting and the ensemble's performance at the end of each conducting round and to complete an end-of-the semester questionnaire about their conducting effectiveness, score study, and the first-semester conducting curriculum.

A series of one-way repeated-measures analyses of variance (ANOVAs) revealed no significant differences between the two groups' five nonverbal conducting behaviors as rated by the two experienced conductors. In general, participants' post-conducting round questionnaires indicated that they were quick to point out flaws in their own conducting and rarely mentioned aspects of ensemble performance. Overall, participants

responded favorably to the score study sessions and reported thinking more deeply about the music in subsequent conducting rounds.

Even though evaluators rated participants' eye contact and overall conducting effectiveness higher after they had received score study assistance, no significant differences between the two groups' nonverbal conducting behaviors were found. Participants commented that their conducting was positively affected by score study, especially in terms of greater eye contact with the ensemble, and that score study appeared to be helpful in their conducting preparation. Yet, these improvements were not apparent to the evaluators.

Upon reflecting on the research design of the study, I noted two limitations that may explain the results. In each conducting round, participants had to conduct (and perform on their primary instrument) the same brief musical excerpt in class. Given the small number of students in each of the classes, participants saw and heard many repetitions of the same excerpt. In other words, participants became very familiar with the music and may have learned to conduct the music in a very specific way as modeled by their classmates. Secondly, these participants were in their very first semester of conducting. Nonverbal aspects of conducting such as expressive gesture and facial expression may have been so novel that determining any effects of the score study treatment on novices' nonverbal conducting behaviors might have been difficult. I decided to conduct a follow-up study with participants who had greater conducting experience. Furthermore, I believed it was important for conductors in the study to have

no interactions with other participants either during their score study or conducting sessions.

The purpose of this study was to illuminate the relationship between score knowledge and conducting behavior. I sought to answer the following questions about novice conductors' conducting behaviors in relationship to score study:

1. How do decisions made during score study affect novice conductors' conducting and rehearsal behaviors?
2. Do ensemble members and experienced conductors perceive differences in the conducting effectiveness between novices' who have studied a score and those who have not?
3. In what ways do novice conductors approach the act of score study?

LIMITATIONS OF THE CURRENT STUDY

The participants in the current study were undergraduate students who volunteered to participate. In an attempt to limit the experience levels of the participants in this study, all conductors had to have completed two semesters of undergraduate conducting. Given this requirement for participation, I was unable to find a large population from which to draw novice conductors; therefore, my sample size was small.

Having to conduct a brass quartet composed of excellent musicians was probably atypical of most participants' conducting experiences. Brass quartets are rarely conducted. Participants may have felt inhibited by the size of this ensemble and been reticent to address performers who were playing so well from the initial reading.

The 5-minute rehearsal episodes used in this study were much shorter than a typical rehearsal period. The short duration of these rehearsal episodes may have limited or focused the type and amount of comments made by participating conductors.

Comments provided by the conductors may have been affected by their knowledge of my interest in the relationship between score study and conducting behaviors. The novice conductors in the experimental group provided very positive feedback about the benefits of the score study session I provided. It may be argued that they did so simply to please me. Additionally, from a design point of view, it would have been ideal to have a second control group receiving a treatment comparable in duration or focus yet different in order to conclusively establish that score study does indeed affect certain conducting behaviors.

A brief music excerpt of approximately one minute in duration was used in this study. While the selection of this music was premeditated, the excerpt represented the style of one composer. Participants' observed conducting behaviors may have been perceived differently given music with different tempi, style characteristics, or instrumentation. Generalizations of these findings to novice conductors beyond those in this study should be made with caution.

II. REVIEW OF LITERATURE

The statement that a conductor should “know his score backwards and forwards” is an axiom that few musicians would disagree with. Many expert conductors attribute their ability to conduct expressively and rehearse efficiently to their understanding of the score. While the question of how to most effectively study the score has spawned many debates, expert conductors agree that one must have some process by which to internalize the music.

Studying the score provides conductors with the opportunity to interpret and organize their thoughts about music prior to stepping onto the podium to conduct an ensemble. Knowledge gained through score study provides the basis for musical interpretation, rehearsal planning, and assessment. Presumably, the knowledge attained by studying the music allows the conductor to formulate a clear musical intention that can be transmitted to ensemble members both verbally and nonverbally during rehearsals and performances. Although conductors must address problems that arise and correct errors during rehearsals, conductors’ directions to performers are most often based on *a priori* decisions made about the music during preparatory score study (Byo & Austin, 2002).

The process of score study, a critical aspect of conductor training, is often considered mysterious in nature. The role it plays in novice conductors’ development has been largely unexplored due to the disparity of opinion over which score study methodologies are most beneficial when learning a new piece of music. Experts disagree as to whether study should involve recordings or work at the piano and what type of

information should be studied (Buell, 1990; Toney, 2000). Extant literature in the field of conducting has only recently examined the relationships among conducting quality, rehearsal behaviors, ensemble performance, and score study methodologies (Goolsby, 1999; Morrison, Price, Geiger, & Cornacchio, 2008; Price, 2006).

Even if the relationship among the complex skills of conducting, rehearsing, and score study have not yet been elucidated, it is clear from the literature that expert conductors demonstrate many skills not evident in novices' conducting. Assessment of conductor effectiveness is usually based on three variables: (1) nonverbal communication skills, which include gesture, facial expression, and eye contact; (2) verbal communication skills such as rehearsal pacing, feedback, and modeling; and (3) score study procedures and their relationship to error detection and correction ability. I will summarize, in Chapter 2, the research findings pertaining to these three topics.

NONVERBAL CONDUCTING BEHAVIORS

Expert conductors have a clear, internalized idea of the music and display a wide array of conducting gestures that are not demonstrated by novice or intermediate conductors (Bergee, 2005). Expressive gestures are one of the best predictors of overall conductor ratings (Silkebakken, 1988). Gestures are intended to represent the musical score nonverbally and to inform musicians of the expressive qualities of the music. The intent embodied in a conductor's gestures encourages performers to coordinate aspects of the musical performance and to play accurately and expressively as an ensemble. Recent research investigating the effects of expressive and nonexpressive conducting has

demonstrated that nonverbal communication behaviors also affect perceptions of conductor effectiveness and individual and ensemble performance (House, 1998; Laib, 1993; Morrison, Price, Geiger, & Cornacchio, 2008; Sidoti, 1990).

There is evidence that ensembles led by conductors who have impressive nonverbal communication skills garner higher performance ratings than do ensembles with less skillful conductors. Grechesky (1985) found that specific nonverbal conducting behaviors like increased body movement, use of the left hand, and facial expressions were directly related to evaluator ratings of ensemble performance quality. Additional evidence indicates that evaluators perceive expressive conductors as eliciting better performance quality from ensembles than unexpressive conductors do (Laib, 1993; Sidoti, 1990). Similarly, adjudicators prefer ensemble performances conducted by expressive conductors, even when all videos viewed and rated are overdubbed so that there is an identical musical track heard for all groups (Morrison, Price, Geiger, & Cornacchio, 2008). The results from this deception study provide good reason to believe that ensembles may be adjudicated on the basis of their conductors' expressivity rather than strictly on the quality of the musical performance.

Multiple studies have corroborated the finding that conductor expressivity affects observers' perceptions. It is known that the ratings of ensemble members' attitudes are more positive under expressive conductors than nonexpressive ones (House, 1998; Price, 2006; Price & Winter, 1991). For instance, Yarbrough (1975) investigated the effects of conducting magnitude on high school and university choral students' behaviors. The high magnitude conductor demonstrated more expressive gestures, more eye contact, and more

varied facial expressions including a much greater frequency of approving ones than did the regular and low magnitude conductor. The students under the direction of the high magnitude conductor were less off-task than students under the regular and low magnitude conductors and reported that they enjoyed performing more than did the students under the other two conductors. While the conductor's expressive gestures may have played a role in these students' perceptions of conductor effectiveness, perhaps getting frequent approvals from the high magnitude conductor may also explain their preference for this conductor.

A small body of research has consistently shown that conductors with expressive nonverbal rehearsal skills elicit a high quality of performance from their ensembles. Studies indicate that ensembles perform significantly better under expressive conductors than under conductors who merely keep time (House, 1998) and that high school instrumentalists' performance is more accurate under conductors using expressive conducting gestures compared to conductors who use unexpressive gestures (Sidoti, 1990). However, a series of recent studies exploring the correlation between expressive performance and conducting has failed to support the hypothesis that ensembles play better and more expressively when an expressive conductor is on the podium (Price & Winter, 1991; Price, 2001; Price, 2005; Price, 2006).

Price and his colleagues have studied the relationship between expressive conducting and expressive performance extensively. Price and Winter (1991) found that a variety of evaluators (including band members, undergraduate instrumental music majors, and experienced adjudicators) rated ensemble performances similarly regardless

of whether they were conducted by an expressive or nonexpressive conductor. In the first and second studies exploring relationships between expressive conducting and expressive performance at music festivals, Price and Chang (2001, 2005) asked undergraduate music education majors to rate the expressivity of video-only conducting excerpts and audio-only excerpts of middle and high school bands performing at a school band festival. No significant relationships were found between ratings of conductor expressivity and expressivity ratings of these conductors (Price & Winter, 1991; Price, 2001; Price, 2005; Price, 2006) ensembles. In fact, Price (2005) found that directors whose bands received I ratings (highest) were rated significantly less expressive than those receiving a rating of II or III (lowest).

After completing a third study involving conductor and ensemble expressivity that replicated the findings of the previous two investigations, Price concluded that “maybe there truly is little or no relationship between conducting and ensemble performance” (Price, 2006, pg. 211), at least in festival settings. Perhaps Price’s findings should not be extrapolated to every instance of ensemble performance. As many public school directors can attest, festival performances are often adjudicated on the basis of very narrow musical criteria; oftentimes, ensemble precision is the most important criteria, and the only one taken into consideration when evaluating the performance. Evaluation of more experienced ensembles or performances in circumstances other than adjudication may yield different results.

The results of the series of studies headed by Price may cast doubt on the notion that performers are successfully interpreting and responding to the expressive gestures

that conductors use to communicate musical intentions. However, the results of other studies indicate that musicians from middle school through the university level prefer conductors who conduct expressively and use a variety of gestures.

One of the main roles of a conductor is to effectively display changes in the music through gesture. Musicians are expected to understand when a phrase might need to be more legato or a certain passage should be pianissimo by interpreting the conductor's gesture. But unless musicians know how to respond to specific conducting gestures, how much does gesturing actually matter?

Musicians are taught the meaning of certain gestures during their time performing in ensembles by observing and responding to specific conducting gestures. From the beginning of their training, conductors learn that gestures should elicit similar and reliable performing responses from individual musicians and ensembles. Although research investigating the relationship between conductor and ensemble expressivity in performance has been inconclusive, a different strand of research suggests that students can learn to accurately recognize and interpret conductor gestures. Evidence shows that individual musical performance skills such as articulation, dynamics, and rhythm can be improved as a result of short-term instruction about conducting gestures.

In the first study to examine conducting gestures, Sousa (1988) asked junior high school, high school, and college musicians to watch a silent videotape of a conductor demonstrating 55 commonly used conducting gestures, which Sousa called emblems. Participants were then asked to describe their recognition of the gesture. Nineteen of 55 conducting emblems were consistently recognized by musicians of all ages and an

additional 19 emblems were recognized by only some of the musicians. Seventeen emblems were not recognized at all. Sousa found differences among the groups, with a greater emblem identification and interpretation among observers with greater experience. Mayne (1992) conducted a similar investigation and obtained comparable results, indicating that junior high band students recognized nearly one-third of emblems while high school and college students recognized the majority of them. Both authors concluded that the source of the older musicians' advantage in these studies was having had more opportunities to work with conductors over the course of years of ensemble performance. Greater experience typically affords musicians the opportunity to play increasingly difficult repertoire that often requires the conductor to use a greater variety of emblems.

Perhaps such interpretive skill could come about much faster in young musicians' development if conductors taught their students to respond to specific conducting gestures. Recognition of and sensitization to conducting emblems has been shown to have a positive impact on the musical performance of novice musicians. Kelly (1997) found that students who received 10 brief training periods of basic conducting instruction improved significantly over their counterparts who had no special training in the areas of rhythmic performance, rhythm reading, and phrasing abilities. Kelly asserted that conducting instruction would be a useful strategy for teaching rhythm and phrasing to an ensemble. Similarly, Cofer (1998) found that seventh-grade instrumentalists who received five consecutive days of instruction designed to increase their ability to

recognize 18 specific conducting emblems (adapted from Sousa, 1988) were superior in comparison to peers who lacked this instruction.

An additional study explored whether high school ensembles could be sensitized to specific conducting emblems. Taylor (1989) enlisted 20 high school band directors to conduct either a sensitizing or a control ensemble. Directors for the sensitizing group offered instruction to their musicians about what gestures would be used and their meanings, while no instructions were given by directors to musicians in the control ensemble. After conductors rehearsed their ensembles for 15 minutes, each ensemble was recorded performing three musical selections. In the first selection, all articulations were displayed on the performers' parts and the conductor's score. The second selection featured articulations only in the players' parts; in the third selection, articulations appeared only in the conductors' scores. The results did not show a positive effect of this type of training on performance, possibly because the amount and quality of instruction in this case were inadequate.

Nonetheless, the overall ability of musicians at a variety of experience levels to recognize conducting emblems supports the idea that conductor training should feature an introduction to certain gestures and instruction about how specific movements influence ensemble performance. Perhaps if musicians' understanding of specific conducting gestures were heightened, the result may be more efficient rehearsals and more expressive musical performance. With the limited amount of rehearsal time available to conductors, training musicians to respond quickly and expressively to conducting gestures would seem to be an important priority.

Although gestures made by the arms and hands convey important musical information, they are not the only means of relaying expressive information to musicians. There are other important aspects of nonverbal communication such as facial expression and eye contact whose meaning students may be able to intuitively interpret on the basis of what they have learned from everyday social communication.

Facial expression and eye contact have been cited as the most important areas of the body for nonverbal communication (Harper, 1978; Malandro, 1983). Conductors and performers signal important melodic, harmonic, and rhythmic moments of the music with “facial expressions and other gestures as a way of sharing with listeners their understanding of the musical significance of such events” (Thompson, 2005). Too often, it is the case that little time is spent developing the potential of the face to express musical feelings. Still, many conductor training programs incorporate activities that draw on mime and theatre to develop facial expressions (MacKay, 2008; Oertle, 1999).

While facial expressions are important in showing approval and disapproval in rehearsal, there is a paucity of research on the use of facial expressions by conductors and the role of facial expressions in communicating expressive intention. Even though conductors view facial expression as an important aspect of nonverbal communication, no research studies have demonstrated that facial expression plays an important role in guiding judgments of conducting effectiveness. For example, in one of the few studies to examine facial expression as a means to convey musical information, Mayne (1992) found that facial expression did not have a significant effect on the ability to interpret conducting gestures.

Nonetheless, research shows that expert conductors do use facial expressions more frequently than novices to provide students with nonverbal feedback and convey emotional information about the music. For example, Byo and Austin (1994) observed that experts and novices were significantly different in terms of time spent in nonverbal behaviors such as right and left hand gestures, eye contact, body movement, cuing, and facial expression. Expert conductors were engaged in expressive facial expressions for 47.5% of rehearsal time, whereas expressive facial expressions were observed only 18.6% of the time in novice conductors' rehearsals. Novice conductors spent 80% of rehearsal time using a neutral facial expression; experts spent about half of that time (47%) using neutral facial expressions. Byo and Austin noted that expert conductors demonstrated more combinations of nonverbal conducting behaviors such as gestures, eye contact, and facial expressions than did novices.

Eye contact is arguably the most critical aspect of facial expression (Green, 1981). A variety of music education studies show that increased eye contact between teacher and students positively affects student attentiveness and on-task behavior as well as perceptions of teacher enthusiasm and intensity in populations ranging from preschool to college students (Price & Winter, 1991; Sims, 1986; Yarborough & Price, 1981). While research supports the idea that eye contact is an important behavior for teachers to develop, there are few empirical studies detailing the effects of eye contact on the interaction between conductors and musicians.

The duration and frequency of eye contact that a conductor makes with musicians depends on a number of factors including the conductor's familiarity with the music and

the repertoire performed. Many public school conductors look at the score more than they do their ensemble (Frederickson, 1992) even though evidence suggests that musicians prefer conductors who do not look at the score often and make frequent eye contact (Carvalho, 1997). Overreliance on the score may be due to the conductor not knowing the music well or feeling more secure looking at the music rather than visually engaging the performers.

Studies have shown that performers prefer conductors who make maximum eye contact and believe that visual communication with the conductor improves their performance (Frederickson, 1994; Skadsem, 1997). For instance, Skadsem (1997) had university and high school choral students sing a dynamic change while watching a videotape of a conductor. Instructions for singing the dynamic change were given under four different methods: while following written dynamics in the music, conductor verbalization, conductor gesture, or while listening to the dynamic changes on headphones as they performed. The results of a survey indicated that singers' confidence was related to their degree of eye contact with the conductor. Singers predicted that they would perform most accurately under the condition involving eye contact with the conductor than verbalization, gesture, or hearing the dynamic change. However, subsequent analyses revealed that singers performed the dynamic change most successfully after concise verbal instructions from the conductor. These results suggest that although eye contact with the conductor increases confidence in musicians, it does not necessarily improve their performance. There is other evidence, however, showing

that eye contact with the conductor does contribute to performers' accuracy and expressivity in addition to providing a psychological boost.

Frederickson (1994) asked 120 undergraduate band members to perform their instruments individually while viewing a videotape of a conductor while listening to an ensemble via headphones. After the initial 16 measures of the excerpt, participants in the experimental groups either lost the audio of the ensemble, the video of the conductor, or both, while those in the control group lost no stimulus and continued to perform without aural or video interruptions. Results showed that the combination of seeing the conductor and hearing the music allowed musicians to be more accurate in their performances than musicians who lost one or more stimulus.

As musicians mature, it seems that they begin to understand that the conductor provides nuanced musical information beyond keeping time and indicating stops and starts. Skasdem (1997) showed that high school singers watched the conductor 44% of the time, beginning undergraduate students watched the conductor 51% of the time, and advanced undergraduate students watched the conductor 65% of the time. Thus, greater experience increases the eye contact made with the conductor and, as explained earlier, improves students' success in recognizing and interpreting conducting emblems.

As musicians mature, it seems that they begin to understand that the conductor provides nuanced musical information beyond keeping time and indicating starts and stops. Byo and Lethco (2001) examined twelve student musicians' eye contact with a conductor to determine during when they looked toward the podium. Participants were videotaped in an ensemble setting while performing two contrasting works: a slow,

expressive chorale and a technically challenging march. Eye contact data obtained from the videotapes indicated that students looked at the conductor much more frequently during the slower-paced chorale than the march. The expressive demands of the chorale may have promoted the increase in conductor-looking time that was not evident in the faster, more technical march. Another reason that the musicians in this study might have focused more on the conductor during the chorale was that they had fewer notes to perform and could more easily divert their attention to watching the conductor. Finally, it is also possible that the musicians did not look at the conductor as frequently during the march because this musical selection presented no changes in tempo. Regardless, the style of the music affects musicians' eye contact with the conductor.

In summary, nonverbal conducting behaviors such as expressive gesture, facial expression, and eye contact seem important for the overall assessment of conductor effectiveness. Even musicians at early stages of instrumental music instruction prefer conductors who use expressive gestures, engage them in eye contact, and use a variety of facial expressions. These students are also capable of recognizing and learning how to respond to many different conducting gestures. However, while it is clear that musicians are sensitive to conductors' nonverbal behaviors, it is not clear whether these behaviors affect their performance. Indeed, there is evidence showing little or no relationship between conducting behaviors and ensemble performance quality (Price & Winter, 1991; Price, 2001; Price, 2005; Price, 2006).

VERBAL CONDUCTING BEHAVIORS

During rehearsal, a wealth of musical information is delivered by the conductor to the ensemble. The clarification and reinforcement of musical ideas is done both verbally and nonverbally. Researchers have investigated conductor effectiveness by comparing the timing, pacing, and content of the verbalizations given by novice and expert conductors.

Expert conductors spend up to 40% of rehearsal time giving verbal instructions to musicians (Caldwell, 1980; Pontious, 1982; Pence, 1999; Sherill, 1986; Thurman, 1977) whereas novice conductors spend over half of the entire rehearsal time talking. In the first of a series of studies, Goolsby (1996) compared common rehearsal pacing, teacher talk, and time spent in performance among 60 experienced, novice, and student band conductors at the middle school and high school levels. He found that student teachers talked mostly about issues related to musical precision and allowed students to play the least. Expert conductors, on the other hand, spent more than half of the total rehearsal time in performance, used the most nonverbal modeling, and talked the least during rehearsals. Experts' rehearsals, unlike those of novices, appeared to be centered on the goal of musical performance.

Rehearsal pacing has also been shown to change with experience, the trend being that experts demonstrate faster pacing. Although texts list rapid pacing as important to the overall success of a rehearsal (Garretson, 1986; Lamb, 1974), there are myriad definitions that have been used to describe pacing. Pacing includes rate and duration of verbalizations and, in broad terms, it is related to the use of instructional time and the way activities are structured (Napoles, 2006). Findings show that expert teachers

alternate much more quickly than novices between talk and ensemble performance and stop significantly more frequently than novices, albeit for shorter durations (Duke, Prickett, & Jellison, 1998; Yarbrough, 1988; Goolsby, 1997). Experts' ability to deliver information much more concisely than novices during their brief stops (Pontious, 1982; Worthy, 2006) may also explain why they generally let their students play for a greater proportion of the rehearsal (more than half) than novices do. Rapid pacing could be achieved by reducing time between cutoff and verbalizations, shortening episodes of rehearsal talk between performance trials, and increasing rate of speech (Byo & Price, 2002).

The finding that expert conductors use time more efficiently than novices should come as no surprise. Experts have been shown to stay on task in rehearsal, spending almost no time discussing nonmusical items and directing the majority of verbalizations towards fixing performance problems (Sherill, 1986). Experts have also demonstrated greater efficiency than novice conductors in preparing music for performance (Goolsby, 1999), addressing multiple performance issues at one time in rehearsal (Worthy, 2003; Worthy, 2006), and giving instruction geared at improving subsequent performances after stopping during rehearsal (Goolsby, 1999).

Whereas novices generally demonstrate slower pacing than experts do, novices still recognize the value of faster pacing and evaluate their peers accordingly. Results from a study by Duke, Prickett, and Jellison (1998) show that pacing is a factor that contributes to novice teachers' preference for various rehearsal styles and affects their assessment of conductors. These researchers asked 44 novice teachers to view video

excerpts of other novices teaching choir, band, and elementary music and found that the majority of respondents evaluated the pace of instruction more positively when it was faster than slower.

Many factors may account for expert conductors' quick pacing and efficiency in correcting performances issues, including their greater familiarity with the score and experience. It is logical to attribute expert conductors' faster pacing to their experience in leading ensembles, but there are other factors that also affect the pacing of a rehearsal such as ensemble sophistication and the proximity of the rehearsal to the concert.

There is evidence that pacing is affected by the performers' capabilities. Gundersen and Murphy (1998) found that episodes of teacher instruction and group performance were shortest at the middle school level and longest at the university level. Worthy (2003) noted that an expert conductor's pacing with a high school ensemble was quicker than an intercollegiate group. The latter study also showed a difference in the nature of rehearsal objectives at different levels since the conductor spent more time on multiple rehearsal targets with the intercollegiate band and more time focused on single rehearsal targets in the high school rehearsals.

Several factors related to the rehearsal process influence expert conductors' pacing. For example, proximity to an upcoming concert influences the proportion of a rehearsal that an ensemble performs and the verbalizations delivered by the conductor. When time is of the essence, conductors are more likely to move the rehearsal along, focusing on getting the ensemble "performance ready." While much has been made of pacing being the quick alternation between teacher and group activity, evidence suggests

that pacing need not always be fast for conductors to be effective in rehearsals. In a study by Yarborough, Dunn, and Baird (1996), a series of rehearsals were videotaped from the initial sightreading of a piece through the rehearsal immediately prior to a concert performance. Observers, who were asked to evaluate the performance quality of the various rehearsals, provided higher ratings for the fast-paced rehearsals occurring closer to the concert than the slowly-paced rehearsals occurring closer to the initial sightreading of the piece. In this study, pacing varied according to when the rehearsal took place.

Another factor that affects pacing is the nature of conductor goals in rehearsal, such as the type of musical or technical issue being addressed, as well as the amount of error correction occurring. After observing five experienced conductors in choral rehearsals, Arthur (2003) conjectured that pacing is difficult to define, that good conductors use both fast and slow pacing within rehearsals, and that the sophistication of the ensemble plays a role in rehearsal pacing. There is evidence showing that pacing is fastest during the error correction part of the rehearsal (Gundersen and Murphy, 1998) and that the pace of rehearsal varies based upon the category of error correction that is being addressed (Cavitt, 2003). In Cavitt's study, musical issues such as technical facility, intonation, and pitch accuracy were paced more quickly than rhythm, articulation, dynamics, and tempo.

Level of experience has consistently been shown to affect conductors' rehearsal goals and the way these goals are addressed during rehearsal. It is generally thought that expert conductors direct their verbalizations toward having the ensemble perform in the style consistent with their preconceived internal sound image. Some studies found that,

like novices, expert conductors devoted most rehearsal time to issues related to rhythm and precision (Pontious, 1982; Sherill, 1986). However, other evidence shows that experienced conductors addressed tone quality, intonation, expression, articulations, and balance more often than novices, who spent the majority of instruction on timing issues (Goolsby, 1997; Goolsby, 1999; Bergee, 2005).

Two studies undertaken by Bergee (2005) and Goolsby (1999) provide compelling evidence about the effect of experience on the content of verbalizations and conducting style. Their results indicate that novice conductors focused on rhythm and cuing whereas experts used a greater variety of conducting gestures and directed verbalizations towards expressive matters like style, balance, blend, and overall ensemble sound. Furthermore, in addition to meaningful differences in the content and timing of conductors' verbalizations there was also a significant difference in the performance quality of the ensembles directed by experts and novices, with bands conducted by experts receiving better ratings.

Perhaps the precise nature of rhythm and correct notes invites novices to spend more time discussing and fixing these errors rather than addressing concepts that experts focus on such as balance, blend, and overall ensemble sound. Expert conductors seem motivated to address both technical and artistic issues and to use a wider repertoire of verbalizations and a greater variety of nonverbal communicative techniques. Expert conductors spend a substantial proportion of their verbalizations engaged in creative communication strategies like providing imagery or modeling sound (Pontious, 1982).

Speaking to a trend found in many studies investigating conductor verbalizations, Worthy noted that experts' rehearsals "were consistently directed towards preconceived notions of the music" (2006, p. 55) that can only be achieved by gaining familiarity with the score. Ideally, the knowledge attained through score study allows the conductor to formulate clear musical intentions that can be transmitted both verbally and nonverbally during rehearsals and performances.

SCORE STUDY AND ERROR DETECTION

As Frank Battisti, former director of bands at the New England Conservatory, laments: "I often see conductors who have not developed a clear musical image of the piece they are conducting. Without a precise concept of the music, the conductor has no musical message to convey through his gestures. Only by studying the score will a conductor discover an expressive message and develop a feeling about the music" (Battisti, 1997, p. 43). This process of internalizing the musical score can be a laborious one that takes a discriminating conductor countless hours to accomplish. Irrespective of the specific strategies employed to study the score, accomplished conductors possess an explicit knowledge of how they believe a piece of music should sound. From the downbeat at the first rehearsal through the concert itself, expert conductors set themselves apart from novices by having a detailed internal sound image of the music they conduct.

Many conducting texts describe systematic score study procedures for conductors to follow in their preparation of a new piece of music (Battisti & Garafolo, 1990; Green,

1981; Hunsberger & Ernst, 1992). Considering the disparity of approaches offered in these conducting texts, it is not surprising that expert conductors are highly individualized in their own method of score preparation. Responses from interviews with five college wind ensemble directors (Ellis, 1994) revealed major differences in score study procedures. These conductors did not share opinions on the order in which musical elements should be analyzed, the amount of time to devote to studying the music, or if musical recordings should be used as study aids. Regardless of their individual methodologies, all agreed that time spent studying the music was essential to their ability to conduct and lead rehearsals.

Given the importance ascribed to score study, one would expect a great deal of research exploring the effects of score familiarization on conducting and teaching behaviors; however, few studies have addressed questions related to score study. Preceding conductor training, undergraduate students spend years in ear-training and sight-singing classes designed specifically to enhance their abilities to hear music analytically. The transfer of these skills to the podium is critical for conductors who must quickly identify and correct performance errors in rehearsals. Perhaps due to the importance of these skills in preparing accurate performances, the majority of score study literature has focused on the ability of participants to detect performance errors in a variety of musical settings.

Surprisingly, research has not come to a consensus about the effect of experience and training on error detection ability. Variables such as music theory knowledge, ear training, academic major, and private instruction do not seem directly correlated with

error detection abilities (Brand and Burnsed, 1981; Vincent, 1990), and neither has experience (Shaw, 1971; Gonzo, 1971). In one of the first studies involving score study and error detection, Gonzo (1971) compared undergraduate music majors' and experienced choral teachers' ability to detect pitch errors while reading short SATB (i.e., soprano, alto, tenor, and bass) choral excerpts. Those with six to ten years of experience performed significantly better than the undergraduate music majors, suggesting that experience plays a role in accurate error detection; however, undergraduates and teachers with one to five years of experience performed similarly.

Most error detection research has focused on the effects of specific methods of score training on the ability of musicians to detect musical errors. The score study techniques that researchers have often employed include silent score study, singing the parts of the score, playing individual parts on the piano while reading the score, and hearing an aural example with or without a score. Overall, the results indicate that score study has a positive effect on error detection. Several studies have indicated that score study with a recording is a beneficial technique for preparing students to detect errors in a listening test (Crowe, 1996; Grunow, 1980; Hopkins, 1991). However, the relative value of score study methods other than those involving recordings have not been clearly validated by research.

For instance, Grunow (1980) found that some form of score study (with or without a recorded example) was more beneficial to participants than hearing a recorded example only or having no score study at all. Likewise, Hopkins (1991) tested pianists and non-pianists in their ability to detect pitch and rhythm errors using various

preparatory techniques and found that score study with a recorded example was significantly more effective than study at the piano. He found no significant differences between the remaining score study methods which included silent score study and sight singing. Similarly, Crowe (1996) had undergraduate music majors complete four individual study sessions using a specific score study technique (study with the score alone, study with score and aural example, score study at the keyboard, or no score study) before taking a pitch and rhythm error detection test. He found that score study with a correct aural example was significantly more effective than study with the score alone and that there were no significant differences among the remaining conditions.

In light of the body of studies that demonstrate the benefit of score study with a recorded example, it was surprising to find that Hochkeppel's results (1993) showed silent study to be more effective than other methods. After having participants undergo three instructional sessions in one of the four music study methods (keyboard study, study with a recorded example, score singing, and silent study), Hochkeppel found that the silent study group was significantly better at detecting errors than both the keyboard study and score singing groups. Furthermore, significant pretest-to-posttest gains were evident only for the score singing and silent study groups. In this study, participants seemed to benefit more from studying the score silently than by using an audible sound source.

Research shows that accuracy in error detection decreases in contexts with increasing number of simultaneous or competing sources of input (Byo & Sheldon, 2000; Crowe, 1996; Sheldon, 2004). Situations that strain or divide the conductor's attention,

music with complicated or multiple textures, and conducting tasks also negatively affect novices' error detection abilities. Crowe (1996) found that error detection test scores were dependent upon the number of lines in each multipart music excerpt, with error detection becoming more difficult as the music became more dense. Sheldon (2004) obtained similar results when asking undergraduate music majors to listen to multivoice and multitimbral examples of band music. She found that novice conductors had difficulty in identifying errors in pieces with multiple parts. More evidence about the detrimental effect of multi-tasking on error detection is provided by Byo and Sheldon (2000) who examined upper level undergraduate music education majors' ability to detect pitch and rhythm errors while singing one, two-, and three-part music excerpts. After a pretest in which participants indicated perceived pitch and rhythm errors while listening to a recording and watching a score, all participants were asked to learn to accurately sing all parts of each excerpt. Then they were once again instructed to detect errors or to do so while singing along. Results indicated that singing while listening had no effect on pitch and rhythm error detection in one-part texture but made error detection far more difficult in two- and three-part textures.

While listening to an ensemble from the podium, a conductor's attention is divided among the demands of following the score, physically gesturing, listening to the ensemble performance, and planning upcoming rehearsal strategies. Whereas many investigations involving score study have found study with aural examples to be superior to other methodologies in aiding error detection (Crowe, 1996; Grunow, 1980; Hopkins,

1991), evidence suggests the use of recordings may not be as beneficial as previously thought when attempting to detect errors during the act of conducting.

Oyen (1998) found that on-podium error detection ability was not aided by having had the opportunity to study the score with a recording. This finding suggests that the physical act of gesturing may impair the ability of conductors to accurately detect performance errors. Similarly, Forsythe and Woods (1983) asked undergraduate and graduate instrumental music education majors to detect errors in intonation, balance, articulation, and tempo while either listening to recorded excerpts or listening and conducting recorded excerpts. Participants who conducted the excerpts were significantly worse at detecting errors than were those who only listened, suggesting that the act of conducting is detrimental to detecting errors in musical performance for novice and intermediate-level conductors.

Overall, research involving score study approaches and error detection has not found that one specific methodology is more effective in detecting errors than another. Studies show that variables such as context, the number, length, and difficulty of parts, and experience all play a role in how well an individual detects musical errors. These findings should not be considered too surprising given the nature of experts' disagreement on how to best approach score study and the existence of multiple methodologies advocated in conducting textbooks. However, a clear and consistent conclusion of this line of research is that increased familiarity with the score, regardless of the study method employed, is beneficial to detecting performance errors.

Anecdotes often praise the ability of expert conductors to fully internalize the score and research indicates that expert conductors have greater competence in effectively communicating their interpretation of the music through verbal and nonverbal means than novices. Two recent neurological studies have investigated the neural imagery and physiological processes underlying expert conductors' behaviors and abilities (Bird & Wilson, 1988; Jackson, 1994). The EEG (electroencephalogram) was used to record brain electrical activity in conductors completing a variety of musical activities including score study and mental rehearsal. The EEG data retrieved provided evidence of conductors' auditory and kinesthetic imagery. These studies are relevant because their results suggest that there is indeed a neural basis for the advantage that experts have over novices in several capacities: in automatizing the connection between musical and physical gestures, in maintaining attention during multiple, simultaneous tasks, and in developing an internal, auditory representation of the music.

In a study by Bird and Wilson (1988), the EEG output during mental rehearsal reflected imagined motor activity (i.e., specific conducting gestures) similar to that occurring during actual performance. This evidence indicates that for skilled conductors, the act of learning a score "in the mind" initiates the planning for conducting gestures. Reading a score induced kinesthetic imagery, suggesting that conductors synthesize sound and gesture in their mental representations. Similarly, Jackson (1994) studied the EEG data of three novice and three expert conductors who completed a variety of tasks, including listening to music, imagining a musical excerpt, conducting while listening, conducting while imagining, and imagining conducting while imagining the music. The

brainwave activity shown by the experts indicated an increased level of mental alertness and attention not displayed by the novices during the procedural tasks. These results suggest that experts have sufficient attentional capacity to engage in the complicated, multi-modal, multi-tasking act of conducting. What is interesting about the EEG studies is that, despite a scarcity of evidence showing the benefit of silent score study for novices (Hochkeppel, 1993), they show that silent imagining of the score activates kinesthetic and auditory imagery for experts.

Research has failed to identify any specific method of score study that is better than another at increasing novices' capacity for internalization of the music. Due to the individualistic nature of score study, the question of how novice conductors approach the act of score study has remained largely unexplored. Three studies, however, have probed the actual practices used by novice conductors to become familiar with novel musical scores.

Wine (1995a) administered a survey to examine how first-year undergraduate, second-year undergraduate, and graduate conducting students mark their musical scores. Respondents indicated that their score markings focused predominately on meter, dynamics, tempo, and cues for specific instruments or performers. A majority of participants indicated that they employed a systematic method when studying and marking a score. Those who used a specific method to mark scores stated that the first step in their procedure was to play or sing through the entire piece. In a follow-up study, Wine (1995b) provided students with a self-instructional handout that illustrated a method of score marking described as "score miniaturization" (synthesizing a full, four-

part choral score into one or two lines containing only meter, tempo, rhythm, and cue markings for specific voices). It was found that most students only used this technique in the initial stages of their score study and indicated they used the method less often near the end of their preparation.

Lane's recent study (2006) provides reason to doubt that novice conductors go about score study in a manner that facilitates internalizing the music. The study involved conducting one-on-one interviews with 21 undergraduate music majors at different levels in their study. The first interview session featured a solo score for the participants' primary instrument and the second utilized an excerpt from a full band score. In both sessions, participants were encouraged to "think out loud" and verbalize their thoughts about their musical choices. Data transcribed from the interviews indicated three primary themes in participants' study approaches. The most salient theme was a lack of transfer of pre-existing musical knowledge into full score situations. Even though participants gave many reasons for the interpretative decisions they made about performance on their primary instruments, they failed to apply this same type of musical decision-making to the full band score. Secondly, as the participants' education level increased, they gave more specific responses about the music than those with less education did. Finally, regardless of education level, almost no participant sang aloud when studying the full band score. Considering that many conducting teachers advocate the singing of individual musical lines as an important element of score study (Kohut & Grant, 1990; Labuta, 1995), participants' lack of singing was notable.

These studies suggest that asking novices to engage in unaided score study may be ineffective, even if a systematic method is provided for them to follow. The results seem to reflect novices' inability to undertake score study in a way that is similar to expert conductors' study of the music. Yet, two other studies have shown that direct assistance methods may be effective in training novices to study scores and detect errors.

DeCarbo (1982) found that training in error detection transfers most effectively when it is done *in situ*. Participants in DeCarbo's study were assigned either to train in error detection while conducting a live ensemble or to train using written programmed materials and recordings. The effects of the two teaching methods were measured through written and conducting tests. Both groups scored similarly on the written test, but the live conducting group obtained significantly higher scores than the programmed materials group did when asked to identify errors while conducting. The conductors who studied with programmed materials were unable to transfer their skills when placed in a novel environment, a finding that seems particularly important given a conductor's need to quickly diagnose and fix performance errors during rehearsal.

Another form of direct assistance training was provided to novice conductors in a study by Hudson (1996) who used a computer training program to aid the process of studying and preparing a full band score. Beginning undergraduate conductors were given a pretest to assess their knowledge of Gustav Holst's *First Suite in E-flat*. All participants then attended three weeks of regular classroom instruction in their beginning conducting class. In addition to their usual classroom experience, the experimental group met six times outside of class and used the investigator-developed computer program to

study the Holst score. Posttest results indicated that those who received the additional computer assistance were significantly better at recalling printed information on the score than those who received no such help.

PURPOSE OF THE STUDY

It appears that no study has explored the extent to which the knowledge gained through score preparation actually affects the nonverbal and verbal conducting behaviors of novices. Although much has been made of experts' command of the score and the effect of score knowledge on their conducting and rehearsing, little is known about novices' approach to score study or how introducing specific musical tasks while studying the music might influence their thinking and subsequent conducting.

None of the reviewed studies explored the possible relationship between nonverbal or verbal conductor effectiveness and knowledge of the score. Perhaps due to the importance of developing novice conductors' listening skills, research involving score study has been confined almost exclusively to error detection and correction tasks. When one considers the number of musical decisions that an informed interpretation involves, it is surprising that no research has examined the relationship between score study, verbal and nonverbal conducting behaviors, and overall conductor effectiveness. The purpose of this study was to illuminate the relationship between score knowledge and conducting behavior.

III. METHOD

PARTICIPANTS

Participants were instrumental music majors ($N = 11$) enrolled in the undergraduate music studies degree program at The University of Texas at Austin (M age = 20.4 years, $SD = 2.1$). All had completed two required semester-long courses in undergraduate conducting and were in their third or fourth year of academic study. Participants provided written consent before the experiment (see Appendix A) and were paid \$20 for their participation. The Institutional Review Board (IRB) at The University of Texas at Austin approved the study.

Participants were recruited for the study via email after I verified their completion of two semesters of undergraduate conducting from conducting teachers at the university. Of 19 eligible participants, 11 agreed to participate in the study.

PARTICIPANT GROUPS

Participants were assigned randomly to either an investigator-led score study group ($n = 6$) or a control group ($n = 5$). During an initial conducting session, participants conducted and rehearsed the same music excerpt after a 5-minute score preparation period. Prior to the first conducting session, participants read, signed, and returned the IRB consent form.

Before attempting to conduct and rehearse the excerpt for a second time one week later, those assigned to the score study condition met with me individually on two

separate occasions for 30 minutes each. During these meetings, participants studied the musical score using a variety of routine and novel methodologies that I describe below. Those assigned to the control group received no assistance between the first and second conducting sessions.

MUSIC EXCERPT SELECTION

Participants all conducted and rehearsed the same excerpt. I chose an excerpt that provided multiple opportunities for the participants to make musical decisions, one that was lyrical, had a moderate tempo, and was brief. In other words, the music would enable participants to interpret the excerpt in a number of ways that might reflect their knowledge, understanding, and decision-making processes.

I surveyed several conducting texts commonly used in undergraduate conducting curricula. The music that best fulfilled my specified criteria was an excerpt from Percy Grainger's full band score *Ye Banks and Braes O' Bonnie Doon* (see Appendix B). This 16-measure, four-part arrangement had the following characteristics: compound meter, diatonic, major key, moderate tempo, suggested indications for a slowing and quickening of tempo, fermatas, written dynamic contrasts, and four-bar phrases.

As is typical of many excerpts found in conducting texts, this reduction was arranged in concert pitch for soprano, alto, tenor, and bass voices. I arranged the original excerpt for a brass quartet consisting of B-flat trumpet, French horn, tenor trombone, and tuba using the computer notation software *Finale*. A transposed score using the brass quartet instrumentation was then produced for each participant and performer.

ENSEMBLE TRAINING SESSION

Immediately prior to the first conducting session, I met with members of the brass quartet to distribute individual parts and conductor evaluation forms and to discuss their roles as performers in this study. All members of the brass quartet were current or former University of Texas at Austin music students who were known by the investigator and selected on the basis of their excellent musicianship.

I led the ensemble through a mock conducting session to acquaint the performers with the different conducting and rehearsal styles they might view in sessions with the study participants. The musicians were informed that they were to perform in a manner consistent with the nonverbal and verbal conducting behaviors demonstrated by each conductor. In order to practice the protocol of the conducting session, I first conducted the piece from beginning to end and then each member of the ensemble rated my performance on a series of 5-point Likert scales: eye contact, facial expression, conducting gesture, ability to lead toward a musically accurate performance, and knowledge of the score (see Appendix C). Brass quartet members rated eye contact from "poor" to "exceptional," facial expression from "unexpressive" to "expressive," effective gesture and ability to lead toward a musically accurate performance from "ineffective" to "effective," and knowledge of the score from "not at all" to "really well." The musicians also wrote their perceptions of my nonverbal conducting effectiveness.

Following the conducting run-through, I rehearsed with the quartet for five minutes. The same evaluation procedure followed the rehearsal, with the performers rating pacing, the ability to lead toward a musically accurate performance, and

knowledge of the score (see Appendix D). Brass quartet members rated my pacing from "slow" to "quick," ability to lead toward a musically accurate performance from "ineffective" to "effective," and knowledge of the score from "not at all" to "really well." In the final portion of the brass quartet training session, I led the musicians through two additional conducting run-throughs designed to enhance their performance flexibility. By the end of the training session, I felt confident that the brass quartet members were prepared to follow the nonverbal gestures and rehearsal instructions of each participating conductor.

FIRST CONDUCTING SESSION

Ten minutes prior to their assigned conducting time, participants reported to a classroom located away from the rehearsal hall. This was done to ensure no individual would hear any part of the music prior to their conducting. A research assistant met each individual and explained the procedures. Following this brief introduction, each participant studied the score for five minutes. In an effort to guard against any predisposition toward the composer or the piece, the title and composer information were intentionally omitted from the score. The participants were alerted when the 5-minute study period had elapsed and were asked if they knew the piece they had just studied. None of the participating conductors indicated prior knowledge of this piece before their initial conducting and rehearsing of the brass quartet. They were then escorted to the rehearsal hall.

After arriving at the rehearsal hall, I greeted each participant and directed them to the podium in front of the brass quartet. Once participants had settled into a comfortable starting position, the following instructions were read aloud:

You will first conduct the ensemble in a complete reading of the score from beginning to end without stopping. After this nonverbal run-through, the ensemble will take 1 minute to provide some written comments about your conducting. During this time, please study the score in preparation for your 5-minute rehearsal. Your goal for this rehearsal is to prepare the most expressive and accurate performance possible as if you were going to lead this ensemble in a public performance. At the end of your rehearsal, the ensemble will once again provide comments about your conducting. Do you have any questions about the procedure?

Following these instructions, participants conducted the piece from beginning to end. Ensemble members then rated the conductors immediately following their conducting run-through performances while the conductors studied the music for one minute and got ready to rehearse the piece. Participants were rated by the quartet members on their eye contact, facial expression, conducting gesture, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score. Members of the brass quartet also provided comments about aspects of each conductor's conducting run-through effectiveness.

Next, participants rehearsed the piece with the quartet for five minutes. Ensemble members then rated the conductors again on their pacing, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score. Brass quartet members then wrote comments about aspects of each conductor's rehearsal effectiveness.

After completing their rehearsals, participants were given a post-conducting questionnaire to gauge their perceptions of their own nonverbal and verbal conducting effectiveness, as well as the performance of the ensemble. Rather than writing their answers, participants were instructed to answer the questions out loud by recording their responses onto a hand-held digital audio recorder in a classroom located away from the rehearsal hall. Transcribed responses of participants' first post-conducting questionnaire appear in Appendix E. After they were finished recording their responses, participants were told not to discuss the piece with one another in the upcoming week or attempt to find recordings or scores of the excerpt. Copies of the musical scores remained with me.

INVESTIGATOR-LED SCORE STUDY SESSIONS

The six participants in the score study group met with me on two separate occasions for 30 minutes each during the seven-day period between the first and second conducting sessions. As previously instructed, each participant brought a pencil and his primary instrument to these meetings. In a previous investigation on score study, one hour of score study was determined to be sufficient given musical excerpts of similar brevity and characteristics (Silvey, 2008). All sessions were video recorded and took place in a large classroom equipped with a piano, stereo system, and music stand. During these two sessions participants did not practice any physical conducting gestures.

The first score study session began with these introductory remarks:

The goal of these two sessions is to help you attain a deep knowledge and understanding of the music you are going to conduct through a variety of score study techniques. Many expert conductors attribute their musical interpretation, conducting gesture, and rehearsal efficiency to the decisions that were made

during score study. During these sessions we will be listening to model recordings, marking the score, singing, and performing on our instruments.

The strategy adopted for these two sessions was indicative of many expert conductors' score study process commonly referred to as "macro-micro-macro." The conductor first gets an overall view of the music before decontextualizing the score into smaller elements and making musical decisions. Finally, the music is recontextualized into a whole (Battisti & Garafolo, 1990; Corporon, 1997).

During the first study session, participants were given their scores from the first conducting session and instructed to determine the most salient characteristics of the music. After a discussion of the musical form and general character of the piece, participants were asked to mark the score in a manner they felt would be helpful in their subsequent conducting and rehearsing. Examples of participants' initial markings included circling meter, dynamic, and tempo indications; labeling primary and secondary melodic material; writing in instrument cues; and adding additional phrase and breath marks in individual parts. The participant and I then discussed the reasons for marking these particular musical items and their importance.

Following our brief discussion, I played three recordings of professional ensembles performing the excerpt. Participants were instructed to listen to the excerpt while following along with their score. I asked the participants to listen for differences between the performances. Although the quality of the performances was similar (e.g., exceptional tone quality, intonation, and expressive performance), there were a number of dissimilarities that made listening to multiple model recordings worthwhile (e.g.,

different tempi, instrumentation, phrasing, and balance of musical lines). Participants were then asked to discuss the similarities and differences among the performances and what influence those recordings might have on their subsequent musical decision-making.

The next portion of the score study session consisted of the identification and singing of the primary melodic line found in the trumpet part. Many conducting teachers advocate singing individual musical lines as an important element of score study (Kohut & Grant, 1990; Labuta, 1995) that helps internalize the music. As this four-bar phrase is repeated nearly identically three times throughout the 16-measure excerpt, there was a need to establish the overall character of this line. After giving participants the starting pitch of the phrase on piano, I led them in a strict, piano-accompanied sing-through of the melody. The performance was aimed at establishing the correct rhythm and pitch and was not intended to convey a personal interpretation. Participants were then asked to sing the line in a manner that was consistent with how they wanted the melody to be performed. It should be noted that participants sang the line differently from one another (e.g., tempo, phrase and dynamic inflection) based upon their individual interpretations. Finally, the entire countermelody, which is found in the French horn part, was sung utilizing the same procedure followed for the trumpet melody.

Next, participants were given printed music of the trumpet and French horn parts transcribed for their primary instrument (e.g., clarinet, French horn, trombone, marimba, bassoon, and violin) and were first asked to perform the trumpet melody on their primary instrument in a manner that reflected the tempo, dynamic inflection, and style with which

they wanted that line to be performed as they conducted. Participants were given multiple opportunities to experiment with their individual performances of the line until they were satisfied with the musical result. Consistent with the idea of clarification probes in qualitative research studies (Patton, 2002), I asked each participant follow-up questions such as "Is that how you want the instruments to sound when you conduct them?" or, more specifically, "Is that the length of note you want going into measure 9?"

While no known score study literature specifically promotes the idea of developing a familiarity with the music through performance on anything other than a keyboard instrument, I thought it would be helpful if the participants could try out their musical decisions on their own instruments as they prepared the music for their upcoming conducting and rehearsal episodes with the ensemble.

Each individual was then prompted to perform the French horn countermelody in a similar fashion. The first score study session concluded after the performance of these two melodic lines with the participants returning their scores to me. At the end of the session, I reminded participants they were not to study the piece between the first and second score study session. This included seeking out and listening to recordings, locating a score, or discussing the piece with other participants.

Upon arrival at the second score study session, I returned participants' scores. I then gave participants a new score that had each of the brass quartet parts transposed for performance on their primary instrument. We started our study by discussing the tempo indications *slightly faster?* and *slacken* at measures 9-12 (see Figure 1). With the aid of the piano, participants individually sang each of the four lines while demonstrating the

amount of *accelerando*, *ritardando*, and *crescendo* they desired from each instrument. Many participants pointed out the similarity of rhythm among instrument pairs (e.g., trumpet/horn and trombone/tuba), the *louden* [sic] indication in the tuba part, and their desire for an overall intensification of sound in measures 11 and 12.

The image shows a musical score for four instruments: B♭ Tpt., Hn., Tbn., and Tuba. The score covers measures 9 through 12. Measure 9 is marked with a '9' and a key signature of one sharp (F#). Above the staff, there are tempo markings: '(slightly faster?)' above measure 9 and 'slacken' above measure 10. The B♭ Tpt. part starts with a treble clef and a key signature of one sharp. The Hn. part starts with a treble clef and a key signature of one sharp. The Tbn. and Tuba parts start with a bass clef and a key signature of two flats (B♭ and E♭). The Tuba part has a 'louden' marking above measure 9. Dynamics include *mf* (mezzo-forte) and *f* (forte). The score shows various musical notations including eighth notes, quarter notes, and half notes, with some measures containing slurs and crescendo/decrescendo hairpins.

Figure 1. Measures 9 through 12 of *Ye Banks and Braes O' Bonnie Doon*

Having previously identified the four 4-bar phrases in the excerpt, I directed participants' attention to the final measure of each phrase (e.g., measures 4, 8, 12, and 16), starting with each part in measure 4. Participants were asked their opinions of where performers should take breaths and how the ends of these musical phrases would be shaped. I then asked the individuals the reasons for their decisions and how this might affect their conducting. The same question was asked of every subsequent phrase ending in measures 8, 12, and 16. Participants were given as much time as needed to perform any or all of these endings in any of the parts on their primary instruments. Phrase

endings were covered extensively with the thinking that these musical performances might influence the size, timing, and continuity of their conducting gestures.

Participants were then told to study the first 4 measures of the score individually with the goal of being able to sing from memory the trumpet, French horn, and trombone parts with accurate rhythm and pitch. These measures were selected because they occur many times throughout the piece and knowledge of these lines was deemed essential in the continuing development of an internal sound image. The tuba part was intentionally left out from this exercise as it sustains a single pitch. No time constraint was placed upon the participants' study of the lines. Performances on the piano or their primary instruments were encouraged during this time. Once participants indicated their readiness, I gave each the starting pitch to the four-bar trumpet phrase and asked them to sing the four-bar melody. If the participants could not accurately sing the correct pitch or rhythm, I had them study the part and perform again until they could sing it correctly. The same procedure was followed for the French horn and trombone parts with all six experimental group participants eventually singing the correct pitch and rhythm for all three lines.

The final activity of the score study session was designed to instill a broad perspective of the piece in conjunction with the "macro-micro-macro" approach to score study. While viewing the score, each individual was instructed to imagine the sound of the entire score from beginning to the end. Each participant was asked to raise his hand at the beginning and end of the excerpt to indicate the start and stopping of their imagining of the sound. Afterwards, I instructed the participants to follow the same procedure with

the only modification being they were to not use the score. Upon completion of this task, I collected the participants' scores and reminded them of their final conducting and rehearsal session.

SECOND CONDUCTING SESSION

Similar to the first session, participants reported to a classroom ten minutes ahead of their scheduled conducting time. Each individual was met by the research assistant and allowed a 1-minute score study period before taking an investigator-designed score familiarity test (see Appendix F). This paper-and-pencil test was designed to assess participants' knowledge of important elements of the score and to gauge if any differences in the recall of printed musical material existed between those students who had received additional score study help and those who had received none. The test consisted of seven questions that covered tempi, dynamics, and melodic and rhythmic material. Upon completion of the test, participants were escorted to the rehearsal hall to conduct and rehearse the quartet. At this point, I met each participant and we followed the same procedures as were used in the first conducting session: conducting run-through, 1-minute rehearsal preparation during which brass quartet members provided ratings and comments, and 5-minute rehearsal followed by quartet members' ratings and comments.

At the end of the session, participants once again recorded their responses to eight questions concerning their nonverbal and verbal conducting effectiveness and the performance of the ensemble (see Appendix G). In addition to their ratings and general comments, brass quartet members, who were blind to the condition, were asked to indicate whether they thought a conductor had or had not received score study and to provide comments supporting their responses.

FINAL CONDUCTOR INTERVIEWS

In the week following the second conducting session, I met individually with each participant for a final interview. These sessions were audio recorded via *Quicktime Pro* software, saved as individual files, and stored on the hard drive of the computer for later access and transcription. All meetings took place in a classroom that allowed for the projection of conducting videos onto a large screen. Each participant was asked a series of questions depending upon their experimental or control group status (see Appendix H). This form of interview is typically referred to as a standardized open-ended interview whose major aim is to "compare and contrast participant responses in order to answer a research question" (Lindlof & Taylor, 2002, p. 178). However, if I felt certain topics needed additional clarification or explanation, I asked follow-up questions consistent with responsive or flexible interviewing (Rubin & Rubin, 2005). Topics included score study strategies, the role of score study in their individual preparation, and the perceived effects of score study on conducting and rehearsing.

In addition to these general score study questions, participants heard and viewed both of their conducting run-through and rehearsal videos. In the first activity, participants watched their first conducting run-through video immediately followed by their second video. Participants were then asked to discuss the similarities and differences they observed in their nonverbal conducting behaviors (i.e., facial expression, eye contact, gesture). Participants were told they could stop or rewind portions of their videos at any point. The final activity consisted of the participants watching their first and second rehearsals while discussing their pacing, rehearsal technique, and musical goals,

and the differences between the two rehearsal episodes. Upon completion of the final interview, participants signed the Payment Release Form and received \$20 compensation.

EXPERIENCED CONDUCTORS' EVALUATION

Brass quartet members' ratings and comments were considered to be critical in this study because they reflected the ensemble's perception of conductor effectiveness. However, I also wanted to obtain the perceptions of experienced conductors not associated with the study. Their evaluation would provide an outside perspective of the conductors' effectiveness as perceived by an audience. Both conducting sessions were videotaped with a Canon Z-100 digital video camera. The tape was of a frontal view of each conductor and was focused entirely on the upper torso, arms, and head.

Three experienced conductors enrolled in The University of Texas at Austin graduate program in wind conducting and who had over 10 years of conducting experience each evaluated participants' conducting videos. Before viewing participants' excerpts, practice examples of two conductors leading conducting run-through and rehearsal episodes were shown to acquaint the evaluators with the rating scales used in the study. Each evaluator then watched both conducting run-through videos for each participant one after the other and rated eye contact, facial expression, conducting gesture, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score using 5-point Likert scales. At a separate scoring session on another day, experienced conductors watched both 5-minute rehearsal episodes one after the other and rated pacing, ability to lead the ensemble toward a musically accurate

performance, and knowledge of the score. All eight variables were the same as those rated by ensemble members after each of the participants' conducting run-through and rehearsal episodes.

Experienced conductors viewed both videos of each participant in a randomized order. They were told that participants' videos were recorded exactly one week apart and were asked to identify the order of the two videos for each conductor. Experienced conductors were blind to the treatment and were not told that some of the participants had received score study assistance. Additionally, they were asked to offer reasons for their responses (see Appendix J). If in doubt as to the order of the two videos, the experienced conductors were asked to mark undecided on their form rather than guessing. After viewing and evaluating both videos for a conductor, the next set of videos was shown to the evaluators until all of the conductors' videos had been shown.

DATA ANALYSIS

In an attempt to "confirm, cross-validate, or corroborate findings" (Creswell & Clark, 2008, p. 183), I collected a variety of quantitative and qualitative data from three primary sources:

- Brass Quartet Members: (1) ratings of participants' conducting run-through and rehearsal behaviors; (2) comments concerning participants' conducting run-through and rehearsal effectiveness; (3) identification of those participants who had or had not received score study
- Experienced Conductors: (1) ratings of participants' conducting run-through and rehearsal behaviors; (2) comments concerning participants' conducting run-through and rehearsal effectiveness; (3) identification of those participants who had or had not received score study after watching only their conducting run-through episodes

- Participants: (1) first post-conducting questionnaire comments; (2) second post-conducting questionnaire comments; (3) final interview comments

Interobserver reliability was calculated for each of the five conducting run-through and three rehearsal behaviors in both conducting sessions one and two. A difference larger than one point between any two brass quartet members' ratings was considered a disagreement. A difference of one point or less between their ratings was considered an agreement. The reliability for the brass quartet members was calculated using the following formula: agreements divided by agreements plus disagreements. The same criteria were used to establish reliability for experienced conductors' ratings. Brass quartet members' interobserver reliability was acceptable and above the conventional threshold of .7 for the eight variables in conducting sessions one and two with the exception of the .63 rehearsal rating of pacing in conducting session two (see Tables 1 & 2). Interobserver reliability for the experienced conductors was acceptable and above the conventional threshold of .7 for all five conducting run-through ratings in conducting session one with the exception of .64 for facial expression. All three rehearsal reliability ratings for conducting session one were acceptable, as well as all five conducting run-through and three rehearsal ratings for conducting session two. Table 1 shows reliability ratings among brass quartet members and experienced conductors for ratings assigned after participants' first and second conducting run-throughs. Table 2 shows reliability ratings among brass quartet members and experienced conductors for ratings assigned after participants' first and second rehearsals.

Table 1

Brass Quartet Members' and Experienced Conductors' Conducting Run-Through Interobserver Reliability

Conducting Session	Evaluator Group	Conducting Run-Through Behaviors				
		Eye Contact	Facial Expression	Effective Gesture	Ability to Lead	Score Familiarity
1	Quartet	.82	.72	.91	.91	.82
	Experienced Conductors	.72	.64	.82	.91	.72
2	Quartet	.82	1.0	.82	.91	.91
	Experienced Conductors	.72	.82	.91	.82	.91

Table 2

Brass Quartet Members' and Experienced Conductors' Rehearsal Interobserver Reliability

Conducting Session	Evaluator Group	Verbal Conducting Behaviors		
		Pacing	Ability to Lead	Score Familiarity
1	Brass Quartet	.72	1.0	.82
	Experienced Conductors	.72	.82	.82
2	Brass Quartet	.63	.72	1.0
	Experienced Conductors	.72	.72	.82

The quantitative data gathered during the conducting sessions were analyzed through a series of Mann-Whitney *U* tests. Often used as the alternative to a one-way ANOVA when sample sizes are small, the Mann-Whitney *U* test is viewed as "the most powerful nonparametric test" (Madsen & Moore, 1978, p. 64). Brass quartet members and experienced conductors evaluated each of the participants' five conducting run-through and three rehearsal behaviors using 5-point Likert scales. Ratings given by the four brass quartet members were averaged for each of the conductors' behaviors. This process yielded eight mean ratings for each of the 11 conductors. The mean ratings of score study conductors and control group conductors were compared through Mann-Whitney *U* tests. The same procedure was followed for ratings assigned by experienced conductors.

Following both conducting sessions, participants completed a post-conducting questionnaire by recording their responses into a hand-held digital audio recorder. I transcribed each response verbatim through the use of a computer word processing program after repeated audio playbacks. Included in these transcriptions were repeated words, utterances such as "um" and "uh," and pauses between verbalizations as reflected by ellipses. The same transcription process was followed for participants' final interviews.

Analysis of participants' post-conducting and final interviews was facilitated through the qualitative analysis software program TAMS Analyzer (Weinstein, 2009). After each transcribed document was imported into the program, I assigned each statement or idea a category. In some cases, a sentence or series of statements

encapsulated more than one idea and was assigned multiple codes. An example of the coding procedure is illustrated by the following quotation from a conductor during the final interview:

Q: How do you know when you are ready to conduct and rehearse a piece of music for the first time?

A: *When, I guess probably when I can kinda of run through the score in my head beforehand and like sing the important lines.*

In this statement, the participant addresses two ideas concerning his conducting and rehearsal readiness. The first part of his statement indicates he can audiate the music from beginning to end in his mind. This idea was labeled as "score audiation." The second half of the sentence illustrates his desire to sing the important musical lines. This statement was labeled as "sing musical lines." During my qualitative analysis, I assigned 40 codes to 133 comments gathered from the first post-conducting questionnaire and 46 codes to 165 comments from the second post-conducting questionnaire. For the final participant interviews I assigned 85 codes to 293 comments. All codes and their frequencies for members of the score study and control groups appear in the Results section in Tables 8, 14, and 15.

An outside observer who was familiar with the project reviewed 20% of the participants' post-conducting questionnaires and final interviews. I provided this person with full transcripts from four conductors' questionnaires and interviews (two each from the score study and control groups), as well as the list of codes I had devised. The level

of agreement between their previously assigned codes and mine was found to be acceptable at 82%.

According to O'Donoghue and Punch (2003), triangulation is a "method of cross-checking data from multiple sources to search for regularities in the research data" (p.78). Specifically, I used the concept of *simultaneous methodological triangulation*. As described by Johnson et al. (2007), this concept involves the "simultaneous use of qualitative and quantitative methods in which there is limited interaction between the two sources of data during the data collection stage, but the findings complement one another at the data interpretation stage" (Johnson, Onwuegbuzie, & Turner, 2007, p.118). The use of multiple data sources (e.g., statistics, participants' interview data, and written comments from ensemble members and experienced conductors) helped to triangulate the data.

IV. RESULTS

The purpose of this study was to illuminate the relationship between score knowledge and conducting behavior. I sought to answer the following questions about novice conductors' conducting behaviors in relationship to score study:

1. How do decisions made during score study affect novice conductors' conducting and rehearsal behaviors?
2. Do ensemble members and experienced conductors perceive differences in the conducting effectiveness between novices' who have studied a score and those who have not?
3. In what ways do novice conductors approach the act of score study?

In this chapter I describe findings associated with participants' data from the first conducting session through their final individual interviews. Participants in this study conducted and rehearsed the same music excerpt during two conducting sessions. Before the second conducting session, six of the participants received investigator-led score study; five participants received no such assistance. Qualitative data included coded responses of participants' post-conducting questionnaires and final interviews, brass quartet members' comments after all conducting run-through and rehearsal episodes, and experienced conductors' comments after viewing participants' conducting run-through videos. Quantitative data consisted of ratings given by brass quartet members and experienced conductors for participants' conducting run-through behaviors (i.e., eye contact, facial expression, conducting gesture, ability to lead the ensemble toward a

musically accurate performance, and knowledge of the score) and rehearsal behaviors (i.e., pacing, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score). Transcriptions of participants' post-conducting questionnaires and final interviews, as well as brass quartet members' and experienced conductors' comments associated with individual conductors, can be found in Appendixes E, G, H, I, and J.

CONDUCTING SESSION ONE: BRASS QUARTET MEMBERS' RATINGS

The five variables observed in the conducting run-through during the first conducting session were: eye contact, facial expression, conducting gesture, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score. The three behaviors observed during the 5-minute rehearsal participants led immediately after the conducting run-through were: pacing, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score. For each variable, the ratings provided by brass quartet members for each conductor were averaged. The mean ratings of score study and control group conductors were compared through Mann-Whitney *U* tests.

No significant differences between the score study and control groups were found for any of the five conducting run-through or three rehearsal behaviors as rated by brass quartet members. Tables 3 and 4 show brass quartet members' conducting run-through and rehearsal behavior ratings.

Table 3

Conducting Session One: Brass Quartet Members' Mean Ratings for Conducting Run-Through Behaviors

Conducting Session	Group	Conducting Run-Through Behaviors				
		Eye Contact	Facial Expression	Effective Gesture	Ability to Lead	Score Familiarity
1	Control	2.8	2.4	2.6	2.6	2.6
	Exp	2.2	2.0	2.4	2.3	2.2

Note: Maximum possible rating = 5

Table 4

Conducting Session One: Brass Quartet Members' Mean Ratings for Rehearsal Behaviors

Conducting Session	Group	Rehearsal Behaviors		
		Pacing	Ability to Lead	Score Familiarity
1	Control	2.8	3.2	2.8
	Exp	2.9	2.9	2.6

Note: Maximum possible rating = 5

CONDUCTING SESSION ONE: EXPERIENCED CONDUCTORS' RATINGS

A second series of Mann-Whitney *U* tests was performed to further explore pretreatment differences between the score study and control groups' mean ratings given by the experienced conductors. For each variable, the ratings provided by experienced conductors for each participant were averaged. The mean ratings of score study and control group conductors were compared through Mann-Whitney *U* tests for each of the five conducting run-through behaviors (i.e., eye contact, facial expression, conducting gesture, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score) and the three rehearsal behaviors (i.e., pacing, ability to lead the ensemble toward a musically accurate performance, and knowledge of the score).

No significant differences between the score study and control groups were found for any of the five conducting run-through or three rehearsal behaviors as rated by the experienced conductors. Tables 5 and 6 show experienced conductors conducting run-through and rehearsal behavior ratings.

Table 5

Conducting Session One: Experienced Conductors' Mean Ratings for Conducting Run-Through Behaviors

Conducting Session	Group	Conducting Run-Through Behaviors				
		Eye Contact	Facial Expression	Effective Gesture	Ability to Lead	Score Familiarity
1	Control	3.2	3.2	3.1	3.0	3.3
	Exp	2.6	2.6	2.8	3.1	2.7

Note: Maximum possible rating = 5

Table 6

Conducting Session One: Experienced Conductors' Mean Ratings for Rehearsal Behaviors

Conducting Session	Group	Rehearsal Behaviors		
		Pacing	Ability to Lead	Score Familiarity
1	Control	3.0	2.7	3.0
	Exp	2.9	2.7	3.1

Note: Maximum possible rating = 5

CONDUCTING SESSION ONE: BRASS QUARTET MEMBERS' COMMENTS

In addition to rating each participant's conducting behaviors, brass quartet members were asked to provide written comments about participants' conducting run-through and rehearsal behaviors. A list of the major topics and their frequencies as addressed by members of the brass quartet appear in Table 7. The transcripts of brass quartet members' comments can be found in Appendix I.

No notable trends distinguishing the two groups of conductors emerged when analyzing the comments provided by the brass quartet members. In general, the comments reflected brass quartet members' negative perceptions of participants' conducting and rehearsal effectiveness.

Responses about participants' nonverbal conducting run-through behaviors were mostly disapproving. Comments typifying brass quartet members' perceptions of poor eye contact included "little and inconsistent eye contact," "too fixated on just one individual," and "looked down at the music too often." Facial expression was the most frequently mentioned and criticized nonverbal behavior. Conductors' facial expressions were described as "neutral," "unchanging," "stoic," "bland," "same," "unsure," and "scared." Brass quartet members' responses characterized their opinion that the conductors' facial expressions did not portray the music. Participants' conducting gestures were seen as ineffective and unexpressive. Some comments indicative of this belief include "not very expressive conducting gestures," "unclear gestures at times," "conducting is too heavy," "gestures are too contained," and "not a very smooth or flowing pattern."

The majority of brass quartet members' comments concerning participants' conducting run-through episodes in the first conducting session indicated that the conductors did not have a clear or expressive musical intent behind their eye contact, facial expression, or gesture. Brass quartet members often wrote that conductors "lacked confidence and conviction," "seemed to be following us and not leading," and "looked very uncomfortable." Additional comments critical of participants' conducting included "unclear and did not know what was happening at times," "does not know the music," and "not much of anything other than beating time."

Following participants' 5-minute rehearsal, brass quartet members provided additional written comments. The quartet members' indicated that participants lacked specificity in their rehearsal, did not clearly communicate their musical goals and were uncertain and hesitant. This perception of ambiguous rehearsal goals was most evident when brass quartet members noted many participants' tendency to run the entire 16-measure excerpt without offering any criticism, feedback, or ideas for improvement.

Table 7
Brass Quartet Members' Conducting Session One Comments

Topic	Code	Treatment Group		Totals
		Score Study	Control	
Eye Contact	Good eye contact	0	1	1
	Poor eye contact	7	9	16
	Not meaningful eye contact	2	2	4
Facial Expression	Unchanging	4	2	6
	Does not match music	1	2	3
	Needs to use more facial expressions	1	1	2
	Expressive	0	1	1
	Pleasant	0	1	1
Gesture	Unclear	5	7	12
	Effective	1	2	3
	Ineffective	5	4	9
	Unexpressive	0	2	2
	Needs to gesture more	1	0	1
Specific Musical Elements	Poor dynamic contrast	1	2	3
	Good tempo	2	1	3
	Poor tempo	1	2	3
Rehearsal Verbalizations	Addressed important musical concepts	2	1	3
	Unclear or hesitant	3	4	7
	Did not know the music	2	3	5
	Needs to show verbalizations with gesture	1	1	2
Rehearsal Pacing	Need to play less	1	2	3
	Need to play more	1	1	2
	Good mixture of individual and group performance	1	0	1
	Slow	2	1	3
	Too many performance repetitions	2	0	2
	Quick and specific feedback	2	1	3
Overall Rehearsal Effectiveness	Better in rehearsal than conducting run-through	0	1	1
	Engaged musicians	1	1	2
	Unclear about musical ideas	4	5	9
	Good tenacity	1	1	2
	Low expectations	2	3	5

Overall	Unclear about musical ideas	12	13	25
Conducting	Does not engage performers	1	3	4
Effectiveness	Follows players	2	2	4
	Appears confident	1	1	2
Totals		72	83	155

CONDUCTING SESSION ONE: PARTICIPANTS' POST-CONDUCTING QUESTIONNAIRE

Immediately following the first conducting session, participants in both the score study and control groups responded to eight questions about their conducting run-through and rehearsal effectiveness. Participants' responses illustrated their difficulties in conducting and rehearsing a piece of music that they had never seen or studied previously. A list of the major topics and their frequencies as addressed by participants appear in Table 8. The transcripts of their comments can be found in Appendix E.

Perceptions of eye contact indicated an over reliance on the score and a lack of instrument-specific eye contact, except when exclusively focusing on the trumpeter who had the melody during the entire 16-measure excerpt.

Typical statements illustrating participant's perceptions include:

"I felt that on the first run-through it was not all that great because I was spending some time looking to the score."

"From the first reading I thought I was looking at the trumpet a lot..."

"A lot of eye contact with the trumpet player."

More so than any other conducting behavior, participants were aware of deficiencies in using their face to portray the music. Participants widely commented on their "unexpressive" and "unchanging" faces while stating their facial expression "needs more work." For example, one participant remarked:

"I usually don't make too many facial expressions. That is one problem I have. I probably kept the same face during almost all of it. That is my natural tendency. I need to work on that. So I am. I say the facial expression was very plain."

When asked to describe their conducting in terms of effective and expressive gestures, there was a great deal of similarity among participant responses. The majority of these comments were negative and focused on reasons behind ineffective or unexpressive gestures. Conductors commonly attributed ineffectual gestures on poor left hand technique and the "mirroring" of the left hand with the right. Even though participants pinpointed weaknesses in their gestures, they were very specific in addressing how particular gestures affected the overall sound of the group, especially in terms of dynamic contrasts. Furthermore, participants were pleased by the sensitivity of the musical response they elicited from the brass quartet.

When asked "What were the musical goals that you tried to transmit to the ensemble?" participants indicated that they had very few goals. The most frequently mentioned musical goal was dynamic contrast with a few additional responses focusing on the importance of bringing out the melody and rhythmic precision. Lack of musical goals was evident during the 5-minute rehearsal episode in which 4 of the 11 participants thought that the rehearsal period was too long and indicated that they had "run out of

rehearsal ideas." Further evidence of participants' lack of musical goals comes from participants' responses to their overall conducting effectiveness in which 6 of 11 conductors mentioned they had no clear musical goals for either their conducting run-through or rehearsal episodes.

This lack of musical goals also affected participants' perceptions of their rehearsal pacing. While 3 of the 11 conductors thought they were effective in quickly selecting and rehearsing "trouble spots" during the rehearsal, the others felt their pacing was negatively affected because they did not have any feedback to offer the ensemble. This was characterized by one participant's comment: "Everyone was playing a lot for the most part. Then I started running out of things to do. So it got a little more slow because I was thinking of what to do next."

An interesting finding that permeates many participants' post-conducting session one questionnaire responses was the belief that the quality of the players diminished their ability to effect musical change. Because participants were conducting and rehearsing performers that they described as "great players," many felt the sounds they were hearing were a result of these musicians' excellence rather than their own conducting. It should be noted that I prompted the brass quartet members to play in the style demonstrated by each conductor prior to their arrival at the rehearsal hall. Consider the following example by one participant:

"They were already doing well and with any conductor, as long as they were giving a stable tempo, I kind of believe that they will do well."

Another conductor shared a similar sentiment, but this time in regard to rehearsal:

"I thought that they rehearsed pretty well. It was kind of easy rehearsing because they really knew how to just get things right off the bat..." This belief is reiterated by 7 of 11 participants remarking that there were no specific problems when asked "Were there any specific areas of individual or ensemble performance that were problematic?"

Conductors mostly attributed their conducting and rehearsal deficiencies to not knowing the score, having very little time to prepare, and not having clear musical goals. While brass quartet members were unaware of the study design and did not know these conductors had only five minutes to prepare for their conducting run-through and rehearsal, they too observed a lack of score knowledge that led to comments about participants' lack of musical goals and conviction. According to the perceptions of brass quartet members and participants, the first conducting session conducting run-through and rehearsal episodes were viewed negatively because of a lack or poor use of nonverbal and verbal conducting behaviors.

Table 8
Score Study and Control Group Conductors' Post-Conducting Questionnaire 1 Responses

Topic of Question	Code	Treatment Group		Totals
		Score Study	Control	
Eye Contact	Equal contact to all members	0	2	2
	Increased eye contact during rehearsal	2	1	3
	Lack of instrument-specific contact	3	2	5
	Looking at melodic voice only	3	2	5
	Overreliance on score	3	2	5
Facial Expression	Needs more work	3	2	5
	Relaxed	0	2	2
	Specific feature affecting ensemble sound	4	1	5
	Unexpressive	3	2	5
Effective Gesture	Better after rehearsal	1	2	3
	Great players	2	2	4
	Ineffective	3	2	5
	Ineffective left hand	2	2	4
	Specific gesture affecting ensemble sound	3	3	6
Expressive Conducting	Left hand mirroring	1	3	4
	Line versus pattern	0	1	1
	Specific gesture affecting ensemble sound	3	3	6
	Technical issue	0	1	1
Musical Goals	Dynamics	4	2	6
	Melody	1	1	2
	Rhythmic precision	1	1	2
Rehearsal Pacing	Fast pacing	1	1	2
	No rehearsal ideas left	2	2	4
	Other	2	2	4
	Rehearsal not needed	1	3	4
	Specific performance issues during rehearsal	2	1	3
	Trouble spots	2	1	3
	Tutti performance	1	1	2

Performance	Balance	0	2	2
Problems	Dynamics	1	0	1
	Great players	1	1	2
	No specific problems	4	3	7
	Phrasing	1	1	2
	Rhythmic precision	1	2	3
Overall	Had clear musical goals	0	1	1
Conducting	Development of an internal	0	1	1
Effectiveness	sound image			
	Great players	1	1	2
	Improved conducting with	2	0	2
	rehearsal			
	Lack of rehearsal tenacity	1	0	1
	No clear musical goals	3	3	6
Totals		68	65	133

CONDUCTING SESSION TWO: SCORE FAMILIARITY TEST

Immediately prior to the second conducting session, participants reported to a classroom to take an investigator-designed score familiarity test. This paper-and-pencil test was administered by a research assistant who informed all participants they would have 1 minute to review the score before taking the test. The purpose of the test was to assess participants' knowledge of the music and to establish posttreatment differences between those students who had received score study and those who had not. The test consisted of seven questions that covered tempi, dynamics, and melodic and rhythmic material. Examples included asking participants to recall and write specific melodic content, rhythmic figures, tempo indications, and dynamics (see Appendix F).

The results of a Mann-Whitney U test revealed that the mean ranking for the score study group ($M = 6.8$) and the control group ($M = 4.4$) differed significantly ($U = 29.5$, $p = .008$). The result of this paper-and-pencil measure indicated that the participants who received investigator-led score study were significantly better at recalling specific musical elements of the score than those who had received no such assistance.

CONDUCTING SESSION TWO: BRASS QUARTET MEMBERS' RATINGS

A Mann-Whitney U test was performed for each of the eight conducting variables under study. For each variable, the ratings provided by brass quartet members for each conductor were averaged. The mean ratings of score study and control group conductors were compared through Mann-Whitney U tests.

Significant differences between the score study and control groups' conducting run-through behaviors were found for eye contact ($U = 25.5$, $p = .05$) and knowledge of the score ($U = 25.5$, $p = .05$). Conductors receiving score study were rated significantly higher than participants who received no score study in eye contact ($M = 3.55$ and $M = 3.15$ respectively) and knowledge of the score ($M = 3.65$ and $M = 2.9$ respectively). No significant differences were found for facial expression, conducting gesture, or ability to lead the ensemble toward a musically accurate performance between the two groups of conductors.

A significant difference was found between the score study and control groups' rehearsal behavior ratings of knowledge of the score ($U = 26.5$, $p = .03$). Conductors receiving score study score were rated significantly higher than participants who received

no score study ($M = 4.3$ and $M = 3.2$ respectively). The comparison of rehearsal pacing between the score study and control groups approached significance ($U = 25$, $p = .06$). No significant difference between the two groups was found for the ability to lead the ensemble toward a musically accurate performance. Tables 9 and 10 show brass quartet members' conducting run-through and rehearsal behavior ratings.

Table 9
Conducting Session Two: Brass Quartet Members' Mean Ratings for Conducting Run-Through Behaviors

Conducting Session	Group	Conducting Run-Through Behaviors				
		Eye Contact	Facial Expression	Effective Gesture	Ability to Lead	Score Familiarity
2	Control	3.15 *	2.75	3.3	3.35	2.9 *
	Exp	3.55	3.0	3.15	3.1	3.65

Note: Maximum possible rating = 5

* $p \leq .05$

Table 10

Conducting Session Two: Brass Quartet Members' Mean Ratings for Rehearsal Behaviors

Conducting Session	Group	Rehearsal Behaviors		
		Pacing	Ability to Lead	Score Familiarity
2	Control	3.0	3.3	3.2 *
	Exp	3.6	3.6	4.3

Note: Maximum possible rating = 5

* $p \leq .05$

CONDUCTING SESSION TWO: EXPERIENCED CONDUCTORS' RATINGS

A Mann-Whitney U test was performed for each of the eight conducting variables under study. For each variable, the ratings provided by experienced conductors for each participant were averaged. The mean ratings of score study and control group conductors were compared through Mann-Whitney U tests.

No significant differences between the score study and control groups were found for any of the five conducting run-through or three rehearsal behaviors as rated by experienced conductors. Tables 11 and 12 show experienced conductors' conducting run-through and rehearsal behavior ratings.

Table 11

Conducting Session Two: Experienced Conductors' Mean Ratings for Conducting Run-Through Behaviors

Conducting Session	Group	Conducting Run-Through Behaviors				
		Eye Contact	Facial Expression	Effective Gesture	Ability to Lead	Score Familiarity
2	Control	3.5	3.5	3.1	3.2	3.1
	Exp	3.0	3.0	3.3	3.3	3.5

Note: Maximum possible rating = 5

Table 12

Conducting Session Two: Experienced Conductors' Mean Ratings for Rehearsal Behaviors

Conducting Session	Group	Rehearsal Behaviors		
		Pacing	Ability to Lead	Score Familiarity
2	Control	2.6	2.9	2.8
	Exp	3.2	3.2	3.6

Note: Maximum possible rating = 5

CONDUCTING SESSION TWO: BRASS QUARTET MEMBERS' COMMENTS

In addition to rating each participant across all eight conducting variables, brass quartet members were asked to provide written comments about participants' conducting run-through and rehearsal behaviors. A list of the major topics and their frequencies as

addressed by members of the brass quartet appear in Table 13. The transcripts of their comments can be found in Appendix I.

Overall, brass quartet members provided more positive comments about participants in the score study group than about those in the control group. Two notable trends favoring those conductors who had received score study emerged when analyzing the comments made by the brass quartet members: (1) increased eye contact during the conducting run-through episode and (2) predetermined rehearsal goals reflecting knowledge of the music.

Responses about participants' eye contact revealed brass quartet members' belief that conductors in the score study group looked at them more frequently than control group conductors. Descriptors such as "good" and "great" were used to describe score study participants' eye contact. Specific comments included "head was out of the score" and "did not look at the music." However, negative comments were directed toward 2 of the 6 score study conductors when brass quartet members noted they "looked up but little communication" and had "a little eye contact with the trumpet, but still seem distant from the ensemble." Similar comments addressing eye contact without meaning were evident for control group conductors who "looked up and down a lot" and "looked up but not necessarily at us."

Comments relating to facial expression were widespread for both the score study and control groups. Brass quartet members' comments ranged from "unchanging" to "pleasant" and "needs to smile more" to "excessive." Score study and control group participants' gestures were viewed largely in the same manner. The majority of

comments included descriptors of conducting patterns such as "smooth," "relaxed," "timid," "reserved," and "clean" that reflected brass quartet members' belief that even though participants' patterns were considered clear and easy-to-follow, they had difficulty discerning the expressive intent behind many of the conducting gestures.

Comments made after the 5-minute rehearsal episodes highlighted brass quartet members' beliefs that score study participants had clearer musical goals, quicker pacing, and knew the music better than did the control group participants. Conductors who had studied the score "addressed important and significant musical areas," "had much to say about musical direction," and "clearly know and understand the music." Conversely, most control group conductors "seemed to be grasping at straws to figure out what to rehearse," were "kind of learning what [they] wanted as [they] went," and "did not have very informative information to give."

Score study participants' rehearsal pacing was viewed as quicker than control group participants'. Brass quartet members noted, along with quicker pacing, that score study participants had much to say, though, for both groups of conductors, having more to say was not always viewed positively. In some cases, comments indicated that saying too much negatively influenced rehearsal pacing: "She knew what she wanted...and slowed down the pace."

A final trend distinguishing participants in the score study and control groups was brass quartet members' belief that score study conductors knew the music better than did control group conductors. Typical comments directed toward three control group conductors' score familiarity included "He isn't familiar enough with all of the lines,"

"needs a better idea of what he wants," and "didn't really know the music they were rehearsing." In contrast, score study conductors' score familiarity was more apparent during the rehearsal episodes. Typical statements included "knew music pretty well," "she clearly knew what she wanted from all parts," and "clearly knows and understands the music." This finding appears to be linked to the score study conductors' propensity towards addressing important musical areas during their rehearsals.

Table 13
Brass Quartet Members' Conducting Session Two Comments

Topic	Code	Treatment Group		Totals
		Score Study	Control	
Eye Contact	Frequent eye contact	6	2	8
	Meaningful	4	0	4
	Instrument-specific	5	2	7
	Poor	2	4	6
Facial Expression	Unchanging	3	2	5
	Needs to use more facial expressions	2	2	4
	Expressive	2	1	3
	Pleasant	1	1	1
	Excessive	0	1	1
Gesture	Unclear	2	2	4
	Effective	6	3	9
	Ineffective	3	5	8
	Expressive	6	4	10
	Unexpressive	3	4	7
Specific Musical Elements	Good conducting through phrase endings	2	1	3
	Good ideas about balance	1	0	1
	Inconsistent tempo	0	1	1
	Consistent tempo	1	0	1
	Nice subdivision of beat	2	1	3

Rehearsal Verbalizations	Addressed important musical concepts	10	2	12
	Unclear or hesitant	1	4	5
	Did not know the music	0	4	4
	Needs to show verbalizations with gesture	2	0	2
Rehearsal Pacing	Talked too much	2	1	3
	Too slow	1	3	4
Overall Rehearsal Effectiveness	Fast	5	2	7
	Quick and specific feedback	4	2	6
	Unclear about musical ideas	1	3	4
	Clear musical goals	8	3	11
	Low expectations	1	1	2
	Knew the music	5	2	7
	Did not know the music	0	3	3
Overall Conducting Effectiveness	Unclear about musical ideas	2	5	7
	Does not engage performers	2	2	4
	Follows players	1	3	4
	Appears confident	4	2	6
	Appears comfortable	3	1	4
Totals		103	79	182

CONDUCTING SESSION TWO: PARTICIPANTS' POST-CONDUCTING QUESTIONNAIRE

Immediately following the second conducting session, participants in both the score study and control group responded to eight questions about their conducting run-through and rehearsal effectiveness. Overall, participants' responses reflect differences in eye contact, rehearsal pacing, and overall conducting effectiveness between the score study and control group. A list of the major topics and their frequencies as addressed by

participants appear in Table 14. The transcripts of their comments can be found in Appendix G.

Score study and control group conductors both mentioned engaging brass quartet members with their eyes; however, a majority of conductors in the score study group reported that their eye contact was meaningful and instrument-specific, whereas members of the control group made no similar comments about eye contact. An example of both meaningful and instrument-specific eye contact follows from a participant who received score study:

Compared to last time, I thought my eye contact was much more meaningful. Like I looked at (trumpet player's name) when he had an important part that I wanted to make sure that he got. I looked at (French hornist's name) for eighth notes at the end of the third phrase leading into the next one. It was more and not just for the sake of just making eye contact, it was because I wanted to guide them through a part or make sure they were with me.

Comments relating to facial expression were similar between the two groups with many participants reporting "unexpressive" facial expressions that "need more work." Two score study participants claimed having more "relaxed" faces and using specific facial features that "affected the group sound."

Effective and expressive gesture comments made by the score study and control groups were nearly indistinguishable. Even though both groups frequently mentioned obtaining increased effectiveness through the use of specific conducting gestures that affected the ensemble sound, 7 of the 11 participants recalled their left hand was "mirroring" their right hand and that their gestures were "ineffective." Interestingly, 3 of

the 5 control group conductors questioned whether their effectiveness was due to either their gestures or rehearsal verbalizations. No such speculation came from any of the score study conductors. For example, one control group conductor remarked: "...pretty much all of my gestures that we rehearsed I talked about them so it's hard to say if I was doing anything just by my gestures or if they just did everything."

Conductors in the score study group perceived faster rehearsal pacing because they had predetermined musical goals, while all five conductors in the control group recalled slower pacing because of their "lack of a plan" or that they simply "ran out of rehearsal ideas." One participant from the control group stated: "I sort of run out of ideas on what to do at the rehearsal, what to work on. Nearing the end of it, it wasn't good pacing 'cause I didn't know what to do." Five of the six members of the score study group commented that addressing predetermined musical goals facilitated a brisker, more productive rehearsal. Control group participants who did not have comparable score study time made no comments about addressing predetermined musical issues.

When asked "Were there any specific areas of individual or ensemble performance that were problematic?" participants' responses indicated very few problems. The most frequently mentioned musical issue among the score study and control groups was rhythmic precision. Interestingly, 5 of the 6 conductors in the score study group mentioned there were no specific problems during their conducting run-through or rehearsal episodes, while 3 of the 5 conductors in the control group mentioned problems with rhythm.

The most striking differences between the score study and the control group was in participants' evaluations of their overall conducting effectiveness. Five of six score study conductors mentioned they had clear musical goals compared to control group conductors who made no mention of having clear musical goals. Beliefs stemming from score study conductors' clear musical goals included reports of heightened familiarity with the music that led to increases in comfort and confidence. Statements typifying score study conductors' increased effectiveness, comfort level, and confidence resulting from familiarity with the score include:

"I think I was more effective than last time. I had more to say. I felt like I knew more about the music and I knew what parts I wanted to be brought out. I had a better idea of what I wanted it to sound like."

This time I felt so much more comfortable with the piece. I knew how all the parts went and how all the parts contributed to the piece and I was more familiar with the different phrases and how each phrase contributed to the excerpt and how it functioned. I think I was way more confident.

"I felt like I was extremely effective because what I ended with was exactly what I wanted to end with. It sounded exactly like what I wanted it to sound like."

Reports of increased effectiveness were not exclusive to conductors in the score study group, however. Four out of five control group conductors noted they either knew the music better, had greater confidence, or led better rehearsals than during the first conducting session. An example of a control group conductor's perception of a better rehearsal: "I don't think as much as last time I had to really stop and think about what to do. I think I had an easier time of knowing what to do next." The conductors in the score

study group attributed their increased conducting and rehearsal effectiveness to having a thorough knowledge of the music and clear musical goals. Specifically, conductors who engaged in score study noted they were more comfortable and confident, that their eye contact was both instrument-specific and meaningful, and that the rehearsal pacing was better than the first time they conducted and rehearsed.

Table 14
Score Study and Control Group Conductors' Post-Conducting Questionnaire 2 Responses

Topic of Question	Code	Treatment Group		Totals
		Score Study	Control	
Eye Contact	Equal contact to all members	1	2	3
	Increased eye contact during rehearsal	2	1	3
	Meaningful eye contact	3	1	4
	Use of instrument-specific contact	5	2	7
Facial Expression	Increased facial expression	1	0	1
	Needs more work	0	3	3
	Relaxed	2	1	3
	Specific feature affecting ensemble sound	2	1	3
	Unexpressive	1	2	3
Effective Gesture	Great players	2	2	4
	Increased effectiveness	3	2	5
	Ineffective (overall)	2	2	4
	Ineffective left hand	3	2	5
	Responding to verbalizations or gesture?	0	3	3
	Specific gesture affecting ensemble sound	5	4	9

Expressive Conducting	Increased expressivity	3	2	5
	Left hand mirroring	3	1	4
	Specific gesture affecting ensemble sound	3	2	5
	Technical issues	1	2	3
	Unexpressive gesture	2	1	3
Musical Goals	Balance	1	2	3
	Dynamics	2	2	4
	Harmony	1	0	1
	Phrasing	5	4	9
	Tempo	2	3	5
	Transitions	1	1	2
Rehearsal Pacing	Addressing predetermined musical goals	4	1	5
	Fast pacing	3	2	5
	Lack of plan	0	3	3
	No rehearsal ideas left	0	2	2
	Rehearsal not needed	1	1	2
	Slow pacing	0	1	1
Performance Problems	Balance	0	1	1
	Dynamics	0	1	1
	Great players	1	2	3
	No specific problems	5	1	6
	Rhythmic precision	1	3	4
	Tempo	0	1	1
Overall Conducting Effectiveness	Better rehearsal	0	2	2
	Clearer musical goals	5	0	5
	Great players	1	0	1
	Increased comfortability	4	0	4
	Increased confidence	3	1	4
	Knew the music	4	1	5
	More planning necessary	0	1	1
	Poor technique	0	5	5
Totals		88	77	165

PERCEPTIONS OF BRASS QUARTET MEMBERS REGARDING DIFFERENCES BETWEEN PARTICIPANTS WITH AND WITHOUT SCORE STUDY

Members of the brass quartet did not know which conductors were assigned to the score study group. At the end of the second conducting session, brass quartet members were asked to indicate whether they thought a conductor had or had not received score study and to provide comments supporting their responses.

Brass quartet members unanimously and accurately identified five of the six conductors who had received score study assistance and four of the five conductors who had not participated in investigator-led score study. The differences between participants receiving and not receiving score study were apparent to ensemble members. Written responses revealed those receiving score study modeled individual lines to demonstrate preferred musical styles, verbalized frequently during rehearsal, and addressed musical goals such as phrasing, expression, and balance. Few comments were directed towards differences in participants' nonverbal conducting behaviors with the exception of eye contact.

PERCEPTIONS OF EXPERIENCED CONDUCTORS REGARDING DIFFERENCES BETWEEN PARTICIPANTS WITH AND WITHOUT SCORE STUDY

Experienced conductors viewed both videos of each participant in a randomized order. They were told that participants' videos were recorded exactly one week apart and were asked to identify the order of the two videos for each conductor. Experienced conductors were blind to the treatment and were not told that some of the participants had received score study assistance. Additionally, they were asked to offer reasons for their

responses (see Appendix J). If in doubt as to the order of the two videos, the experienced conductors were asked to mark undecided on their form rather than guessing.

Experienced conductors identified the correct order of five of the six conductors who had received score study assistance. In other words, experienced conductors were able to discern an improvement in 5 of the 6 score study conductors from session 1 to session 2 by accurately ordering the videos of the sessions. Typical comments made by experienced conductors distinguishing score study participants' second conducting session video from their first included perceptions of increased confidence and comfortability, better eye contact, more expressive facial expression, stronger musical interpretation, and more appropriate choice of gesture. All comments written by experienced conductors about participants' videos appear in Appendix J.

Identifications of participants' videos in the control group were mostly inaccurate and reflected much disagreement among the experienced conductors. They inaccurately identified 3 of the 5 control group participants' second session conducting run-through videos as being their first. The responses to the remaining two participants' videos in the control group were "undecided" or were split between the choices of session one, session two, or undecided. In other words, experienced conductors had difficulty noticing improvements in control group participants' videos from session 1 to session 2. It is important to mention that, unlike brass quartet members, experienced conductors' perceptions were based only on the run-throughs and not the rehearsal episodes.

FINAL PARTICIPANT INTERVIEWS

At the conclusion of the study, I met with participants to administer a final open-ended interview. Topics included score study strategies, the role of score study in participants' individual preparation, and the perceived effects of score study on conducting and rehearsing. All transcribed final interviews can be found in Appendix H. A list of the major topics and their frequencies as addressed by participants appear in Table 15.

When preparing to conduct a piece of music for the first time, participants noted a need to "get a road map" or an overview of the music that would enable them to conduct from the beginning to the end of the piece without major conducting errors. The majority of participants' responses focused on the issues of timing, key signature, and melodic content while few comments addressed any expressive musical elements.

A theme of "knowing the music" emerged when participants were asked about their score study goals and knowledge of when they were ready to conduct and rehearse a new piece of music for the first time. Participants' goals included their need to "know the music," "know trouble spots," and "know important musical lines." Only 4 of 11 participants mentioned their conducting and rehearsal readiness was predicated on observable behaviors, with some mentioning their ability to sing musical lines and conduct and sing simultaneously.

An example illustrating this theme appears below:

Well, I mean I want to get to know it intimately so, if anybody has any questions, I know exactly where they're talking about...what I should do...how I should answer it. I mean, it's just I should know it a hundred times better than my students should, er, better than they do.

When asked what changes took place in their thinking because of the additional score study, conductors in the score study group most frequently mentioned establishing a personal musical interpretation that led them to listen to musical lines other than the melody. An example of a participant's change in thinking:

I think the first rehearsal or the first little time I had with the ensemble I concentrated a lot on the trumpet because he was the melody, he was the one that I heard, he was the one whose melody I was familiar with. Um...and the second time around I was more aware of what was happening in the other voices and how they supported the trumpet and how they fit, ya know, into what the main melody was doing.

Consider this example from another conductor in the score study group:

...made me more aware of what everyone else was doing instead of just looking at the trumpet. Um, and then I had a better idea of like how I was gonna conduct the piece because I knew, um, like how like especially the phrase endings like how I want them to go. Um, and then that really also helped the rehearsal time and like what I wanted to get done.

All six conductors in the score study group reported playing their primary instrument or singing individual lines as the most useful score study method. Even though these conductors attributed much of their success in conducting session two on having clear musical goals that were developed through specific, demonstrable score study behaviors, they failed to mention many specific goals or score study strategies when questioned earlier about their own methods in learning a new piece of music.

Interestingly, half of the score study conductors mentioned "looking at all the parts" as a beneficial score study strategy.

Score study participants reported clear differences between the run-through videos of the two conducting sessions. When watching the second session run-through videos, they referred to a perceivable increase in comfort and confidence that positively affected eye contact and expressive gesture. For instance, all six score study participants reported eye contact that was more frequent and meaningful during the second conducting run-through episode than during the first, while the majority of control group participants stated they did not see any differences in their eye contact. Both groups agreed that their facial expression was mostly the same between conducting sessions 1 and 2.

Control group conductors also unanimously referred to their greater confidence when specifically asked during their final interviews. However, most unsolicited comments about overall differences between the two conducting run-through videos involved issues related to personal conducting technique. In contrast to control group conductors who did not mention any specific factors that affected their confidence, score study participants reported feeling greater confidence during their conducting run-through and rehearsal episodes because of increased expressivity. When asked if or how their expressivity changed from the first to the second conducting sessions, conductors in the score study group stated they had clearer musical intentions that led to their belief that the sound they heard being produced by the ensemble matched their internal sound image.

Consider the following example from a participant in the score study group:

"Um, expressively with a purpose the second time. Um, ya know, I tell myself that I could conduct expressively the first time but, I don't think I was quite sure about what I was wanting to express, so it was just, it was like a general expressiveness."

Score study conductors frequently mentioned having expressive goals for the second rehearsal that resulted in a clearer rehearsal plan and better pacing. The majority of control group participants believed they had better pacing during the first rehearsal episode than the second, while all score study participants reported better pacing in the second rehearsal episode. In a quotation indicative of most participants' belief, one control group conductor stated: "I think even though the first time I felt like, I well...I was just looking for things to do, so I was just standing there staring at the score and I don't think I really did that the second time."

Score study participants noted that their improved rehearsal effectiveness during the second conducting session was a result of having a clearer rehearsal plan. Comments from three score study conductors provide additional evidence of this difference between the first and second rehearsal episodes:

"Man, oh, man I had a plan that second time. I knew exactly what I wanted to work on. The first time I was...kind of floating through rehearsal."

"Um, so the second time I had a clearer like, I guess plan of action, um, for what I was gonna do. The first time I didn't know what to do at all."

Um, with the first rehearsal at the beginning I was like, "Ah, let's just do something and then maybe I'll develop an idea of what I wanna do once we do something." And with the second one I went in with several specific goals in mind that I wanted to accomplish.

When asked "Did your musical goals change from one conducting excerpt to the next?" all control group participants reported no changes while 4 out of the 6 score study participants stated they had expressive goals during the second rehearsal episode that were not present for their first rehearsal episode. For the final question of the interview, participants were asked "Did you find it any easier to hear any perceived mistakes when you conducted the second time?" Participants' responses were wide-ranging, with comments indicating they heard more mistakes the first time, no mistakes were made, and that the brass quartet members were "great players." Three of the six score study participants also noted that score study seemed to focus their listening during the second rehearsal episode.

Table 15
Score Study and Control Group Conductors' Final Interview Responses

Topic or Question	Code	Treatment Group		Totals
		Score Study	Control	
Preparing to Conduct A New Piece for the First Time	Cursory overview	7	5	12
	Develop an internal sound image	1	0	1
	Expressive content	2	0	2
	Harmonic content	1	0	1
	Key signature	2	3	5
	Look for specific instrumental "trouble spots"	3	1	4
	Mark the score	1	0	1
	Melodic content	3	2	5
	Play or sing individual musical lines	1	2	3
	Timing Issues	8	7	15

Knowledge of Readiness to Rehearse and Conduct for the First Time	Build an internal sound image	2	2	4
	Can answer ensemble questions	0	1	1
	Can conduct and sing lines at the same time	1	1	2
	Can sing important lines	2	1	3
	Know important musical lines	3	2	5
	Know trouble spots	2	0	2
Score Study Goals	Ability to cue instrumental entrances	1	0	1
	Develop internal sound image	1	0	1
	Develop interpretation	2	2	4
	Discover instrumental trouble spots	1	2	3
	Know big musical changes	1	0	1
	Know the music	2	4	6
Most Useful Score Study Methods	Listening to model recordings	2	NA	2
	Looking at every part	3	NA	3
	Playing primary instruments	4	NA	4
	Singing individual lines	2	NA	2
Change in Thinking Based on Score Study	Better rehearsal planning	1	NA	1
	Established personal musical interpretation	4	NA	4
	Increased comfortability	2	NA	2
	Increased non-melodic voice awareness	3	NA	3
Overall Differences in Conducting- Only Videos	Increased comfortability second time	3	0	3
	Increased confidence second time	3	0	3
	Increased conductor expressivity second time	4	2	6
	Increased eye contact second time	3	2	5
	Increased gestural effectiveness second time	5	1	6
	More meaningful facial expressions second time	0	2	2
	Technique-related issues	1	5	6
	Tempo	1	2	3

Most Confident:	Time 1	6	5	11
Time 1 or 2?	Time 2	0	0	0
Why more confident?	Better eye contact	1	1	2
	Better facial expression	1	0	1
	Better gestural effectiveness	2	0	2
	Ensemble sounds matched my internal sound image	3	0	3
	Experience	0	2	2
	Knew the score better	1	2	3
Better Eye Contact:	Time 1	0	0	0
Time 1 or 2?	Time 2	6	2	8
	Neither	0	3	3
How did eye contact change?	Looked at specific players	1	1	2
	More frequent	5	1	6
	More meaningful	2	0	2
	Did not	0	3	3
Better Facial Expressions:	Time 1	1	1	2
Time 1 or 2?	Time 2	3	1	4
	Neither	2	3	5
How did facial expression change?	Did not change	2	3	5
	Mentions specific facial feature	0	1	1
	More relaxed or natural	2	1	3
	More indicative of music	2	0	2
Most Expressive:	Time 1	1	0	1
Time 1 or 2?	Time 2	5	5	11
Why did expressivity change?	Clearer musical intentions	3	1	4
	Knew music better	1	2	3
	Increased gestural expressivity	3	2	5
Overall Differences in Rehearsal Videos	Clearer rehearsal plan second time	5	2	7
	Conveyed verbalizations more through gestures second time	0	1	1
	Faster paced second time	1	1	2
	Increased comfortability second time	1	2	3
	More modeling second time	1	0	1
	No differences	0	1	1
	Other	1	2	3

Best Pacing:	Time 1	0	3	3
Time 1 or 2?	Time 2	6	1	7
	Same	0	1	1
Most Ensemble	Time 1	2	0	2
Performance:	Time 2	2	4	6
Time 1 or 2?	Do not know	2	1	3
Any Changes in Musical Goals?	Expressive goals the second time	4	0	4
	Had musical goals the second time	1	0	1
	No changes	0	5	5
Perceived Mistakes	Great players	1	1	2
	Heard mistakes more the second time	2	2	4
	No mistakes made	2	1	3
	Score study focused listening	3	1	4
Totals		175	118	293

Note: "NA" equals not answered

SUMMARY OF RESULTS

Brass quartet members rated novice conductors who participated in systematic, investigator-led score study significantly higher than those receiving no assistance for the conducting run-through behaviors of eye contact and knowledge of the score and the rehearsal behavior of knowledge of the score. No significant differences between the score study and control group participants' conducting run-through or rehearsal ratings were found for facial expression, conducting gesture, pacing, or the ability to lead the ensemble toward a musically accurate performance.

Experienced conductors rated novice conductors who participated in systematic, investigator-led score study similarly to those who received no assistance. No significant

differences between the score study and control groups were found for any of the five conducting run-through or three rehearsal behaviors for ratings assigned by the experienced conductors during conducting session two.

After performing for participants' conducting run-through episodes, brass quartet members accurately identified 5 of the 6 conductors who had received score study assistance and 4 of the 5 conductors who had not. Experienced conductors were asked to identify the order of the two videos of each conductor. They accurately identified the order of 5 of the 6 score study conductors' videos. Identifications of participants' videos in the control group were mostly inaccurate and reflected much disagreement among the experienced conductors.

Participants' post-conducting one and two questionnaires and final interviews, and comments provided by brass quartet members and experienced conductors, reflected three notable trends distinguishing those who had engaged in score study from those who had not: (1) more meaningful, instrument-specific eye contact; (2) greater confidence and comfort; and (3) more effective gestures and other nonverbal behaviors in rehearsal, all of which seemed to result from a more clearly defined interpretation of the music.

V. DISCUSSION

There are few studies that explore the relationships between novice conductors' understanding of the music they conduct and their conducting performance in rehearsals. Extant research about developing conductors has focused mostly on detection and correction of performance errors and comparisons of expert and novice conductors' nonverbal and verbal conducting behaviors. Research that describes the conducting behavior of experts (Byo & Austin, 1994; Goolsby, 1997; Goolsby, 1999; Pontious, 1982) is important in that it provides for novices a picture of conducting behavior that may guide study and practice. The differences between the conducting of experts and novices has frequently been examined, but the reasoning behind experts' behavior is also of great importance.

Interviews with expert conductors indicate that their thinking and decision-making are based on an individualized, systematic process of music study (Buell, 1990; Ellis, 1994; Wagar, 1991). The interpretive decisions made during score study ultimately lead to the development of an internal sound image that serves to guide expert conductors' nonverbal and verbal behaviors (Bergee, 2005; Worthy, 2006). Given that experts' conducting effectiveness is widely understood to be due in large part to their familiarity with the music they conduct, I set out to study the impact of score study on novice conductors' nonverbal and verbal conducting behaviors.

Presented with a brief music excerpt of which they had no prior knowledge, 11 undergraduate conducting students conducted and rehearsed a live brass quartet. After

this initial conducting session, participants in the experimental group ($n = 6$) received two, individual 30-minute score study training sessions, while the control group ($n = 5$) received no assistance. All participants then returned one week later to conduct and rehearse the ensemble for a second time.

The purpose of this study was to answer the following questions about novice conductors' conducting behaviors in relationship to score study:

1. How do decisions made during score study affect novice conductors' conducting and rehearsal behaviors?
2. Do ensemble members and experienced conductors perceive differences in the conducting effectiveness between novices' who have studied a score and those who have not?
3. In what ways do novice conductors approach the act of score study?

OVERVIEW OF RESULTS

Conductors were observed and rated by brass quartet members and experienced conductors while conducting a run-through of the musical excerpt and a 5-minute rehearsal episode. All conducting behaviors were rated during participants' first conducting session (i.e., pretest) and second conducting session (i.e., posttest).

No pretreatment differences between the score study and control groups were found for any of the five conducting run-through or three rehearsal behaviors as rated by brass quartet members or experienced conductors. In general, the comments provided by brass quartet members and experienced conductors to both groups of conductors were mostly negative. Overall, evaluators felt that the participants did not have a clear or expressive musical intent during their conducting run-through or rehearsal episodes and

rated participants' conducting and rehearsal effectiveness poorly. This was not unexpected considering that participants had no prior knowledge of the music and were given only five minutes to study the score before conducting and rehearsing the brass quartet.

When discussing conductors' behaviors the first time they performed with the ensemble, evaluators tended to notice and criticize specific elements of participants' nonverbal conducting behavior such as eye contact, facial expression, and gesture. With no preparation, knowledge of the score, or time to develop a personal musical interpretation, it is not surprising that brass quartet members and experienced conductors commented frequently about isolated nonverbal conducting behaviors and their dissatisfaction with these novices' conducting. Similarly, the participants themselves were critical of individual nonverbal aspects of their own conducting that they attributed to lack of familiarity with the music. Previous research has found that evaluators tend to notice more individual elements of nonverbal conducting behavior for novices while focusing on more general conducting aspects for experts (Johnson, Frederickson, Achey, & Gentry, 2003). Similarly in this study, evaluators identified specific nonverbal conducting behaviors probably because no overarching musical intent or effect was observed in these novices' conducting.

After the first conducting session, score study conductors participated in the treatment: They met individually with the investigator on two separate occasions for 30 minutes each during the seven-day period between the first and second conducting session. During these two sessions, score study conductors familiarized themselves with

the music in a manner consistent with what expert conductors usually do: marking the music, listening to model recordings, and singing and performing lines on their primary instrument (Ellis, 1994).

Immediately before conducting and rehearsing the brass quartet for the second time, participants completed an investigator-designed score familiarity exam that covered tempi, dynamics, and melodic and rhythmic material. The results of this paper-and-pencil measure indicated that the participants who had received score study were significantly better at recalling specific musical elements of the score than those who had received no such assistance. In other words, the score study sessions were effective in training score study conductors to recognize and recall the printed musical content of the piece they were about to conduct.

Identical to the first conducting session (i.e., pretest), conductors were observed and rated by brass quartet members and experienced conductors after a run-through of the music excerpt and a 5-minute rehearsal episode. Unlike the analyses of the ratings and comments for the first conducting session, the analyses of the data of the second session revealed significant differences between the score study and control groups.

As rated by brass quartet members, score study conductors had more frequent eye contact and demonstrated greater knowledge of the score than did control group conductors during their conducting run-through episodes. No differences were found between these two groups' facial expression, gesture, or ability to lead the ensemble toward a musically accurate performance. During the rehearsal episodes, score study conductors showed more knowledge of the music than control group conductors

according to the brass quartet musicians' ratings. No differences were found between these two groups' pacing or ability to lead the ensemble toward a musically accurate performance.

Brass quartet musicians' comments about the conductors supported their ratings. They explained that score study conductors had more meaningful and instrument-specific eye contact and appeared to be more comfortable and confident than control group conductors during their conducting run-through episodes. During participants' rehearsal episodes, score study conductors were perceived as leading rehearsals that were paced faster than control group conductors' and that were directed toward addressing predetermined rehearsal goals that reflected their knowledge of the music. On the other hand, conductors in the control group were perceived as unclear and hesitant during their rehearsal episodes.

Overall, brass quartet members perceived notable differences between the two groups' conductors in confidence, level of comfort, and score familiarity. The brass quartet musicians' comments revealed that conductors who had studied the score appeared more confident in their conducting gestures and more comfortable conducting and rehearsing the quartet than did control group conductors. Furthermore, score study conductors' score familiarity was evident in the way they rehearsed the music. According to the brass musicians, they modeled frequently, had a quick rehearsal pace, and addressed musical concepts such as balance, blend, and expressive music making.

Similar factors have been found to play a role in establishing perceptions of conductors' ability and intensity in previous studies (Frederickson, Johnson, & Robinson,

1998; Madsen, 1990). Their results show that slow pacing and an unconfident demeanor could reduce perceptions of a conductor's rehearsal intensity. In this study, brass quartet members believed that control group conductors lacked a rehearsal intensity that was evident in score study conductors' rehearsal episodes.

Although the conducting behaviors of the two groups differed according to brass quartet members, the ratings of the experienced conductors did not differentiate the two groups. No significant differences between the score study and control groups were found for any of the ratings given by experienced conductors. Perhaps the difference in ratings between the brass quartet members and the experienced conductors lies in their roles as evaluators in this study. In addition to providing ratings, brass quartet members performed for each of the conductors in this study. This unique interaction with the conductors that was experienced by brass quartet members was quite different than that of experienced conductors who passively evaluated conductors after viewing videos of their conducting. One specific example of the discrepancy in ratings of the performers and experienced conductors involved eye contact. Brass quartet members rated score study conductors' eye contact higher than control group conductors' in conducting sessions 1 and 2, while experienced conductors found control group conductors' eye contact to be better than score study conductors' during the same sessions. Due to the positioning of the video camera, experienced conductors would not have been able to easily discern who the conductors were looking at during their conducting run-through performances. Indeed, one of the experienced conductors commented on the difficulty in

determining where and to whom participants were directing their gazes after viewing participants' videos.

Even though experienced conductors did not perceive differences in specific conducting behaviors between the two groups, they somehow did differentiate the two groups. They noticed a general improvement in conducting from session 1 to session 2 for conductors who had received score study but did not reliably do so for conductors who had not. There was a remarkable agreement between both groups of evaluators in terms of the perceivable improvements in the conducting of the score study group. These results were obtained when brass quartet members and experienced conductors were asked to identify the participants who had received score study and the ones who had not. It is important to note that all the evaluators were blind to the condition and did not have any prior knowledge of which conductors were in the control and experimental groups. Brass quartet members accurately identified five of the six conductors who had received score study assistance and four of the five conductors who had not. Experienced conductors were asked to identify the order of the two videos of each conductor. They accurately identified the order of five of the six score study conductors' videos. Identifications of participants' videos in the control group were mostly inaccurate and reflected much disagreement among the experienced conductors. They inaccurately identified 3 of the 5 control group participants' second session conducting run-through videos as being their first.

Brass quartet members' and experienced conductors' accurate identifications of score study and control group conductors involved evaluators' perceptions that

conductors who had received score study displayed the following traits that were not as evident in control group conductors' conducting: frequent eye contact, more expressive facial expression, stronger and more convincing musical interpretation, more appropriate choice of gesture, more frequent modeling, and rehearsal verbalizations that were geared towards expressive musical elements. According to these evaluators' perceptions, the score study treatment produced noticeable differences between the two groups' conducting run-through and rehearsal behaviors.

Interestingly, the conductor in the score study group who had been misidentified by brass quartet members as not having had score study was also misidentified by experienced conductors. In reviewing mean ratings for each conducting run-through and rehearsal behavior across both conducting sessions, I found that this conductor, on average, was rated more poorly than all the other conductors in six of the eight conducting behaviors. A similar phenomenon was evident for the member of the control group who brass quartet members believed had participated in score study. This conductor received some of the highest mean ratings in all categories. For these two individuals, the addition or absence of score study did not have much of an effect on their conducting effectiveness, at least as rated by experienced conductors and brass quartet members.

Immediately following each conducting session, participants were asked to provide responses to eight questions about their conducting run-through and rehearsal behaviors. Responses by participants in both the score study and control groups after their first conducting session were very similar to those made by the brass quartet.

Participants specifically mentioned their poor eye contact, overreliance on the score, unchanging facial expression, unexpressive gesture, and slow rehearsal pacing. Conductors thought their conducting and rehearsal deficiencies stemmed from not knowing the music, having only five minutes to prepare the score, and not having any clear musical goals. Overall, the comments conductors made about themselves were negative regardless of the group they were assigned and corroborated the perceptions of brass quartet members and experienced conductors.

The comments conductors provided about themselves after the second conducting session were drastically different from those of the first session. While control group conductors mentioned their lack of score knowledge and planning negatively affected their conducting run-through and rehearsal behaviors, score study conductors believed that having clearly developed musical ideas led to gains in their eye contact, rehearsal pacing, and overall conducting and rehearsal effectiveness. Score study conductors felt they had more meaningful and instrument-specific eye contact and that their development of clear predetermined musical goals facilitated quicker paced rehearsals and feelings of increased comfort and confidence. On the other hand, control group conductors mentioned their lack of score knowledge and planning negatively affected their conducting and rehearsal behaviors. Both score study and control group participants commented frequently about specific gestures that positively influenced the ensemble sound and their lack of facial expression.

At the conclusion of the study, participants heard and viewed both of their conducting run-through and rehearsal videos during a final interview. They were asked to

discuss similarities and differences between the two conducting sessions in relationship to specific nonverbal and verbal conducting behaviors, and the role of score study in their own conducting and rehearsal preparation. Most participants' responses about the importance of score study revealed a theme of needing to "know the music" in order to establish a personal musical interpretation or develop an internal sound image of the piece, a finding analogous with expert opinion (Battisti, 1997; Wagar, 1991). When asked, participants mentioned very few specific or observable behaviors such as singing musical lines or practicing conducting gestures that they utilized in their own score study to reach their stated goal of internalizing the music.

After watching both of their conducting run-through videos, conductors in the score study group reported having increased comfort and confidence that positively affected their eye contact and expressive gesture. Control group conductors also mentioned being more confident after viewing the second conducting session video but did not report that any specific nonverbal behaviors such as eye contact or gesture were greatly impacted as a result. When addressing differences in the rehearsal episodes, score study conductors frequently mentioned having expressive goals for the second conducting session that resulted in a clearer rehearsal plan and quicker pacing than control group conductors who perceived few differences between their rehearsal videos and reported no changes in musical goals between the first and second rehearsal episodes.

PARTICIPANTS' CONDUCTING BEHAVIORS

EYE CONTACT

The nonverbal conducting behavior that distinguished score study conductors from control group conductors in the posttests was eye contact. Brass quartet members rated score study conductors' eye contact significantly higher than they rated the control group conductors'. Experienced conductors and brass quartet members wrote that score study conductors' eye contact was frequent, meaningful, and instrument-specific. Comments from three of the six score study conductors about their own conducting indicated that their score study helped increase their awareness of musical lines other than the melody. They felt that this helped direct their eye contact to instruments other than the trumpet (e.g., French horn, trombone, and tuba).

The fact that the conductors who studied the score were able to look up from the score more often than those receiving no study may seem unremarkable. But this appears important given evidence suggesting that performers prefer conductors who look at the score scarcely and make frequent eye contact (Carvalho, 1997). Perceptions of increased eye contact were not isolated to the conductors themselves; brass quartet members noticed the difference as well.

Eye contact ratings given by brass quartet members and experienced conductors to the score study and control group conductors were not similar in this study. One reason may help explain this disparity between the two groups of evaluators' ratings of eye contact. As mentioned by brass quartet members and score study participants, more

meaningful and instrument-specific eye contact was observed throughout the second conducting session than during the first conducting session. The meaningfulness and specificity of these conductors' glances were probably difficult to determine by experienced conductors from the videos. Due to the positioning of the video camera, experienced conductors would not have been able to easily identify the specificity or meaningfulness of participants' glances during their conducting run-through performances. This may help explain the disparity in ratings between the brass quartet member and experienced conductors' ratings.

FACIAL EXPRESSION

Even though most participants commented that they made no facial expressions and needed to use their faces to portray the music more effectively after the first conducting session, their comments about their facial expressions were also negative regarding their second conducting session performance. Brass quartet members and experienced conductors agreed with the participants, often noting that participants' faces were unexpressive, unchanging, and not indicative of the music they were conducting. However, expert conductors use an expressive face more often than novices (Byo & Austin, 1994). Given the number of nonverbal skills involved in learning to conduct, facial expression is often viewed as one of the least important skills to develop in undergraduate conductors (Romines, 2003). The results of this study indicate that brief score study instruction did not affect the use of facial expression by novice conductors.

GESTURE

Research has shown that expressive gestures elicit better performance quality than unexpressive ones (Grechesky, 1985; House, 1998; Laib, 1993; Morrison, Price, Geiger, & Cornacchio, 2008; Sidoti, 1990). One of the main purposes of this study was to see whether score study, independent of participants actually practicing specific or pre-planned gestures, would produce recognizable changes in novices' gesturing. Based upon the comments and ratings given by evaluators, as well as participants' comments, this did not appear to be the case. Even though participants in the score study group reported more noticeable changes in their conducting (e.g., pattern size, subdivision of certain beats, tempo variations) than did control group conductors, these perceived changes did not significantly affect evaluators' perceptions of their gestural effectiveness.

MUSICAL GOALS AND REHEARSAL VERBALIZATIONS

Another explanation for evaluators' perceptions that score study conductors' rehearsals were more effective than control group conductors lies in the content of the conductors' verbalizations. Brass quartet members and experienced conductors noted score study conductors' rehearsals were geared towards phrasing, expression, balance, and overall ensemble sound. Expert conductors' rehearsals have been found to center on these same rehearsal issues (Bergee, 2005; Goolsby, 1997; Goolsby, 1999). Given the relative technical ease of this brief music excerpt for the advanced musicians in this study, it is possible that score study conductors were left to attend to expressive elements

of the music because performance issues such as the rhythm and notes were never in doubt.

However, score study participants' perceptions of their own conducting revealed that they had developed expressive musical goals during the score study sessions that were not present during the first rehearsal. Brass quartet members' perceptions were similar to score study participants in that they felt score study conductors addressed important musical ideas and concepts.

Brass quartet members noticed that score study conductors tended to model much more frequently than control group conductors, a finding consistent with what experts teachers do during rehearsals and private lessons (Colprit, 2000; Duke & Simmons, 2004; Goolsby, 1997; Goolsby, 1999). For score study conductors, it appeared that verbalizing and singing how they wanted the music to be performed was easier than showing their intent nonverbally.

PACING

One area that appeared to have benefited from the treatment was pacing. Score study conductors all felt their rehearsals were better paced during the second rehearsal episode, and 3 of the 5 control group conductors thought they had better pacing the first time they rehearsed. These perceptions were reinforced by brass quartet members' comments that score study conductors demonstrated faster pacing than did control group conductors. The mean difference between these two groups' pacing indeed approached significance.

Research involving rehearsal pacing indicates that expert conductors' pacing is affected by both the quality and experience of the performing ensemble (Gundersen & Murphy, 1998; Worthy, 2003). It is interesting to note that many conductors, mostly those in the control group, mentioned they were rehearsing "great players" and questioned the need for additional rehearsal. Additionally, I observed that 3 out of the 5 control group conductors ended their 5-minute rehearsals during the second conducting session before the five minutes allotted for the rehearsals had elapsed, while all of the score study conductors utilized their entire five minutes.

Brass quartet members commented that the control group participants who ended their rehearsals early had not developed a clear sense of the piece and what they wanted to accomplish during their rehearsals. Brass quartet members felt this was related to their slow pacing during both conducting sessions. These comments may be considered additional evidence that control group conductors had a limited vision of the music.

In a study analyzing expert conductors' rehearsals, Worthy noted that experts' rehearsals "were consistently directed towards preconceived notions of the music" (2006, p. 55). It seems that novice conductors in this study who had developed clear musical ideas during score study tended to lead rehearsals that were paced faster than the rehearsals of the control group conductors and were indeed directed towards addressing *a priori* musical goals.

However, brass quartet members noted that having greater familiarity with the music did not always translate to faster rehearsal pacing. Brass quartet members felt two conductors who had received the score study led rehearsals that were paced slowly.

Additional comments indicated that these two conductors talked for long durations that limited the amount of time brass quartet members played during the second conducting session rehearsal episode.

SCORE FAMILIARITY

Perhaps the most striking differences between the two groups' conducting behaviors were seen in the rehearsal episodes of the second conducting session. Brass quartet members rated score study conductors' score familiarity significantly higher than control group conductors. Additionally, they rated score study conductors almost two full points higher in score knowledge in the second conducting session than in the first ($M = 4.3$ and $M = 2.6$ respectively). On the other hand, their ratings of the control group conductors' familiarity with the music did not improve nearly as much between sessions 1 and 2 ($M = 2.8$ and $M = 3.2$ respectively). Comments from score study participants indicated their belief that establishing and addressing clear musical goals led to better, more efficient rehearsals. Conversely, control group participants reported having no rehearsal ideas or specific plans for either session.

As previously mentioned, the content of the score study conductors' verbalizations probably helped brass quartet members more easily identify those conductors who had received score study and those who had not. However, brass quartet members did rate score study conductors' score familiarity significantly higher than control group conductors after watching just their conducting run-through episodes. Quite possibly, brass quartet musicians' perceptions of conductors' score familiarity during

their conducting run-throughs were not dependent upon any specifically demonstrated conducting behavior, but rather an instinctive feeling they surmised from performing for a particular conductor. In other words, it may seem that "...we can perhaps conclude that the whole in conducting is greater than the sum of the parts (Byo, 1994, p. 42)."

PARTICIPANTS' SCORE STUDY BELIEFS

Another purpose of the study was to explore how novice conductors approach the act of score study. In general, novices indicated that when preparing to conduct and rehearse a piece of music for the first time they would first get a cursory overview of the piece that centered around issues such as time and key signature, tempo, finding out which instruments had the melody, and looking for "trouble spots." In another study involving undergraduate and graduate students' score study, these same issues were reported as the musical elements that were first marked when studying a score (Wine, 1995a). Seven participants in this study stated their readiness to conduct and rehearse for the first time would occur after they "knew the music" and 4 of the 11 participants remarked that their readiness would be evident once they had created an internal sound image of the music. Very few participants made any mention of expressive elements of the music.

In a follow-up question, participants were asked, "What are your most important goals when studying a score?" Participants indicated their need to "know the music," "know where the big musical changes are," and to discover the instrumental "trouble spots." No participant mentioned the development of any specific expressive goals;

however, 5 of the 11 participants did state their goal was to develop a personal interpretation of the music.

Most participants' responses describing their own score study approaches were similar to expert conductors' belief that developing an internal sound image or musical interpretation was the most important goal of score study (Bamberger, 1965; Casey, 1993; Ellis, 1994; Harris, 2001). In particular, score study conductors noted during the final interview that the score study sessions changed their thinking about the music and helped them to establish a personal musical interpretation. Irrespective of this belief, however, novice conductors in this study rarely mentioned any specific strategies that they would use in their own score study to achieve their goal of internalizing the music. Interestingly, score study participants reported that the most useful methodologies during their score study sessions involved the singing or playing of individual musical lines.

Lane (2006) found that novice conductors' "perceived functions of score study described during interview sessions did not transfer into actual practice of score preparation" (p. 226). For example, the use of audible sound that the participants employed when studying solo literature for their own instruments was not used with the study of full band scores. Even though score study conductors in this study reported which methodologies they felt were most effective when getting ready to conduct and rehearse for the second time, they did not refer to these strategies when specifically questioned about their own music preparation.

IMPLICATIONS FOR CONDUCTING TRAINING PROGRAMS

Expert conductors agree that knowledge gained through score study provides the basis for musical interpretation, rehearsal planning, and ensemble evaluation (Bamberger, 1965; Casey, 1993; Ellis, 1994; Harris, 2001). In the present investigation, novice conductors who studied the score commented about aspects of their conducting and rehearsal effectiveness that they felt had improved because of score study. Yet, according to the perceptions of brass quartet members and experienced conductors who rated the novices, many score study and control group participants' individual nonverbal conducting behaviors did not improve from the first conducting session to the second. In particular, minimal gains were seen in expressive gesture and facial expression.

Novice conductors' post-conducting questionnaire and final interview comments indicated their ability to identify positive and negative aspects of their conducting that were noticed by ensemble members and experienced conductors. Although the identification of some of these deficiencies did not seem sufficient to produce individual improvements, research shows that targeted self-assessment via videotaped analysis positively influences many novices' conducting skills (Grashel, 1991; McWilliams, 1996; Price, 1985).

Novice conductors in this study were adept at analyzing the effectiveness of their conducting and rehearsal behaviors as evidenced by their post-conducting questionnaire and final interview responses. Many of these comments, however, were directed toward specific conducting behaviors that may or may not have affected individual or ensemble

performance such as independence of the left hand and the mirroring of the left and right hands.

Perhaps students in undergraduate conducting courses should be made to regularly evaluate their own conducting in relationship to the sounds that are being produced by the ensemble. Rather than focusing mostly on technical aspects of their own conducting, novices may benefit from shifting the focus from their own performance to that of the ensembles they are conducting. Placing less emphasis on technical issues of conducting and more emphasis on the musical product may free conductors to think less about their own conducting and express their musical intent more effectively.

Helping move novice conductors' thinking toward the relationship between their conducting and the ensemble sound would seem to hinge on their familiarity and command of the music. Participants in this study seemed to understand the importance of learning and internalizing the music, but reported few strategies for realizing these goals. Even though the opinion that score study is essential for conductors has been widely documented in conducting texts (Battisti & Garafolo, 1990; Green, 1981; Hunsberger & Ernst, 1992), content analyses of widely used conducting texts revealed that a very small percentage of pages were actually devoted to the process (Covington, 1993; Lane, 2002a). Conducting teachers may consider describing and demonstrating specific score study strategies that are used by expert conductors in the hope that novices might utilize these same strategies to facilitate the goal of internalizing the music.

Manfredo (2008) examined factors influencing the content of undergraduate instrumental conducting courses and found a lack of agreement among faculty

concerning what topics should be addressed during the first and second semester of instrumental conducting. In particular, instructors of introductory conducting courses placed little or no emphasis on score study. Given the preponderance of evidence that score study is the most salient feature of expert conductors' preparation, it is odd that conducting teachers seem to place little emphasis on the importance of this activity when working with beginning conductors. This may be due to the typical introductory conducting course curriculum in which almost all class time is centered on the development of nonverbal behaviors such as gesture and eye contact. Perhaps the organization of a conducting curriculum in which nonverbal behaviors, rehearsal techniques, and score study techniques are integrated and developed simultaneously would better serve novice conductors and prospective music educators.

Discussing his thoughts regarding conductor preparation, Atlanta Symphony Orchestra conductor Robert Spano states: "What I can't teach people, however, is intention. If you have a clear intention, if the stereo inside your head is clicking along and giving you something that's exactly what you want, then it almost doesn't matter what you do with your hands" (quoted in Davidson, 2006, p. 37). Likewise, participants who received score study commented that increased familiarity with the music allowed them to develop clear musical goals. While evaluators did not notice significant changes in gesture between those who had and had not studied the score, they were aware that score study conductors knew the music well and were attempting to show the ensemble a musical intention that had not been formulated during the first conducting session.

It stands to reason, however, that conducting teachers who are charged with developing the skills of novice conductors should continue to explore changes in their conducting curricula based upon expert conductors' beliefs about the enterprise. If an important goal of teaching is to guide novices to think more like experts, the following quote from a participant's final interview represents thinking that resembles many experts' belief about the power of having a deep knowledge of the music: "Because I think if you have an idea of what it sounds like, the gestures will come kind of naturally. Not something that is really rehearsed."

Appendix A

CONSENT FORM

The Effects of Score Study on Novices' Conducting and Rehearsal Behaviors

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You are being asked to participate in a research study. This form provides you with information about the study. The person in charge of this research will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you do not understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time and your refusal will not impact current or future relationships with UT Austin or participating sites. To do so simply tell the researcher you wish to stop participation.

The purpose of this study is to examine the effects of score familiarity on novice conductors' nonverbal and verbal conducting behaviors.

If you agree to participate in this study, I will ask you to do the following things:

- Conduct and rehearse a single, one-minute musical excerpt on two occasions
- Take a paper-and-pencil score familiarity test (twice)
- Possibly participate in two, sixty-minute score study training sessions designed to increase your familiarity with the musical score
- Possibly demonstrate your understanding of the musical score through performing on a musical instrument, singing rhythms, and marking your music
- Complete questionnaires about your conducting and the ensemble's performance
- Attend a final interview session in which you identify changes in your thinking, conducting and rehearsing while watching videos of your own conducting

Total estimated time to participate in the study is 2 hours.

Risks and Benefits: The risk associated with this study is no greater than everyday life. Possible benefits of this study include a better understanding of how score familiarity may aid in your preparation to conduct and rehearse an ensemble and feedback concerning your conducting from ensemble members and experienced conductors.

Compensation: You will be compensated \$20 for your participation in this study.

Confidentiality:

- All conducting episodes, score study tasks (e.g., performing on your instrument, singing), and interview sessions will be videotaped
- Conducting videos will be presented to outside observers without individually identifying participants
- The records of this study will be stored securely and kept confidential
- Videos will be viewed for research purposes by the investigator and outside observers
- To make possible future analysis the investigator will retain the video recordings

The records of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin, members of the Institutional Review Board, and (study sponsors, if any) have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

Contacts and Questions:

If you have any questions about the study, please ask now. If you have questions later, want additional information, or wish to withdraw your participation call the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support at (512) 471-8871 or email: orssc@uts.cc.utexas.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information and have sufficient information to make a decision about participating in this study. I consent to participate in the study.

Signature: _____ Date: _____

Signature of Investigator: _____ Date: _____

We may wish to present some of the tapes from this study at scientific conventions or as demonstrations in the classrooms. Please sign below if you are willing to allow us to do so with your tape.

Signature: _____ Date: _____

I hereby give permission for the videotape made for this research to also be used for educational purposes.

Signature: _____ Date: _____

Appendix B

Ye Banks and Braes o' Bonnie Doon

P. Grainger

Slowly Flowing

Trumpet in B \flat *mf*

Horn in F *mf*

Trombone *p*

Tuba *p*

5

B \flat Tpt. *f*

Hn.

Tbn.

Tuba

Ye Banks and Braes o' Bonnie Doon

2

9 (slightly faster?) slacken

B \flat Tpt. *mf* *f* *mf*

Hn. *mf* *f*

Tbn. *mf* *f*

Tuba *mf* *f*

louden

13

B \flat Tpt. *mp*

Hn. *mp*

Tbn. *mp*

Tuba *mp*

Appendix C

Conductor Evaluation Form (Conducting Run-Through)

Instructions

Please rate the conductor in the following areas: (1) eye contact, (2) facial expression, (3) conducting gesture, (4) nonverbal effectiveness, and (5) music knowledge. Additionally, you are asked to provide written comments concerning your perceptions of each conductor and their nonverbal effectiveness on the back of this evaluation form.

After the conductor's rehearsal, please circle a number from 1 – 5 (1 being the lowest, 5 being the highest) that best represents how you feel each conductor displayed the aforementioned conductor attributes.

How would you rate the conductor's eye contact with the ensemble?

POOR ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **EXCEPTIONAL**
1 2 3 4 5

How would you rate the conductor's facial expression?

UNEXPRESSIVE ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **EXPRESSIVE**
1 2 3 4 5

How would you rate the effectiveness of the conductor's gestures ?

INEFFECTIVE ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **VERY EFFECTIVE**
1 2 3 4 5

How would you rate the conductor's ability to lead you toward a musically accurate performance?

INEFFECTIVE ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **VERY EFFECTIVE**
1 2 3 4 5

How well do you think the conductor knew the music they were conducting?

NOT AT ALL ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **REALLY WELL**
1 2 3 4 5

Please provide written comments concerning the conductor's nonverbal conducting effectiveness on the back of this evaluation form.

Appendix D

Conductor Evaluation Form (Rehearsal)

Instructions

Please rate the conductor in the following areas: (1) pacing, (2) rehearsal ability, and (3) music knowledge. Additionally, you are asked to provide written comments concerning your perceptions of each conductor and their rehearsal effectiveness on the back of this evaluation form.

After the conductor's rehearsal, please circle a number from 1 – 5 (1 being the lowest, 5 being the highest) that best represents how you feel each conductor displayed the aforementioned conductor attributes.

How would you rate the pace of the rehearsal?

SLOW ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **QUICK**
1 2 3 4 5

How would you rate the conductor's ability to lead you toward a musically accurate performance?

INEFFECTIVE ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **VERY EFFECTIVE**
1 2 3 4 5

How well do you think the conductor knew the music they were rehearsing?

NOT AT ALL ⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒⇒ **REALLY WELL**
1 2 3 4 5

Please provide written comments concerning the conductor's rehearsal effectiveness on the back of this evaluation form.

Appendix E

Conductor A (Score Study) Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I felt that on the first run-through it was not all that great because I was spending some time looking to the score. I listened to the melody inside my head. Well, I was reading through the score and kind of got familiar with French horn harmony and all that stuff but I hadn't got really, not confident enough yet. I felt like towards the end I was making pretty good eye contact with the people that I wanted to do things and I really wouldn't look at the score that much the second time or really during rehearsal because it was pretty simple. It was only like 16 measures, so I felt that was okay.

2. How would you describe your facial expression?

I think my facial expression was definitely better on the second run-through than the first run-through. I was familiarizing myself with the piece. Now I feel fairly familiar with it. I think I can do more in the way of expressing dynamics with my face and maybe giving them a better cue at the beginning of the piece, as far as when to start and what dynamic to start at.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I felt the ensemble was extremely responsive to my gestures, even implied ones that I didn't necessarily do all the way but were implied with my face. I really felt like they were pretty good in there with what I wanted. I felt like, overall, that my gestures were pretty good.

4. How expressive was your conducting?

I felt that my conducting was fairly expressive considering that I had only had the piece for five minutes. I mean, I can certainly do better. It is a beautiful flowing piece of music. I felt I could be fairly expressive.

5. What were the musical goals that you tried to transmit to the ensemble?

I tried to observe all the markings on the score as far as the dynamics of the trumpet and the horn were at a mezzo forte playing the counter melody with the horn and the trumpet. I was trying to get the horn to bring out the counter melody a little bit more. She kept kind of slipping back into not playing out as much. I guess I could have done more with eye contact as far as that is concerned. I messed with the balance just a little bit at the beginning, but it was fairly good. Those guys are good players. Everybody followed the markings on the score fairly well. There was one point at which I wanted the horn to do a mini-crescendo at the end of the third line at measure 12. I was just trying to get the mini-crescendo into the last line. Before I could get it connected, the session was over. I suppose I could have done more with that, if I had a little more time.

6. Describe the pacing of your rehearsal.

I felt that the pacing was all right. It was a little bit awkward because I didn't really.... I guess when I was analyzing the score I was thinking more in terms of I am going to conduct this rather than what my goals are going to be, because I just was not thinking about the rehearsal aspect very much. I can't remember when I was told that I was going to rehearse....maybe as I was leaving. But I just studied the score with the goal of running through and hitting as many of the score markings as possible at the right places like the louder part of the tuba in measure 9 and the crescendo marking of maybe beat 2 in measure 15. So that and the slackening and speeding up. I guess the pacing of the rehearsal was OK, but it could have been a little faster.

7. Were there any specific areas of individual or ensemble performance that were problematic?

The trombone player had a little bit of a fuzzy tone. I could've eased a little bit. These guys have been playing for a while now. I don't think there were really any specific areas of individual or ensemble performance that were problematic. They have pretty good idea of each other's sound. I think so. Anyway, I thought that was all right.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I felt like I was fairly effective considering I just walked in and did it. I mean, I got them to do some of the things I wanted to do. Certainly most of the things I wanted them to do was straight off the score. I am not that

good at score study to begin with other than just memorizing the things on the score and singing the melody before I go in. So I didn't really have the resources available to make performance goals that weren't already on the score. So I guess they just kind of saw what I was gesturing and they did it more than what was generally marked on their part. Anyway, sorry, I am just kind of rambling. I felt like rehearsing the ensemble was not as good as it could've been. It definitely could've been better. So, hopefully I'll get a chance to do that again.

Conductor B (Score Study)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Um, eye contact I felt was not very present in the first run through of the piece. It definitely got better as the rehearsal progressed. Also, I was trying to communicate silently with the ensemble members with a few gestures. I felt I had good eye contact. Ensemble as a whole..... I felt that the whole first section was very much of a high brass space. I kind of ignored tuba and trombone. I also felt, I also got better as the rehearsal increased. Probably just actually being able to hear more of the parts in my head than I had score studied...actually hearing harmony instead of individual lines.

2. How would you describe your facial expression?

I think the only facial expression I can actually remember is I did try to smile while I was conducting and during rehearsal because, of course, I have great players, so smile. It was a lovely short little piece. Smiling was appropriate and they were very receptive too. There was more nonverbal feedback. Small gestures were very much in order. As far as the facial expression of the phrase goes, I feel like I had some fitting facial expressions....raising an eyebrow, softer features for, you know, quieter parts of the phrase.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Once again, fabulous players who have already played together. I would like to think that I used a pretty fluid pattern for most of the time. So they were producing very smooth legato tones. There were jumpy parts but I realize that was because of my conducting and the pick-up I was giving.

4. How expressive was your conducting?

Since I have rather long arms, I have a tendency of overdoing large patterns. So maybe a little bit over expressive would be what I would have to say. But I think I did a fairly good job of being expressive of the music, of the phrases, and really marking where the phrases are and the rise and the fall of the phrases.

5. What were the musical goals that you tried to transmit to the ensemble?

Mostly just melody, harmony, phrases...a pedal tone balance I tried to bring out when the tuba part, the pedal tone, had some changes, which changed the harmony. When the harmony was a little bit stagnant having the moving part of the harmony, namely the trombone and this little (sings trombone part) to bring it out. So more balance than anything else was my musical goal. Very played well together despite my confusing gestures.

6. Describe the pacing of your rehearsal.

I got through everything I wanted to get through fairly quickly. So I guess that is a good thing. I broke down my rehearsal spots into phrases. There being only four phrases in the piece, it left a lot of time open. I guess I could've rehearsed smaller spots, for example sixteenth, dotted eighth pattern was mostly together, but it was not always together. I guess breaking it down into smaller rehearsal chunks would've been effective but I did have pacing of the rehearsal in mind and didn't want to drag because of that. Just kind of keeping everyone playing I thought was the best way to go with everyone being obviously comfortable with their parts.

7. Were there any specific areas of individual or ensemble performance that were problematic?

The transition between phrases that I am going to attribute to me and trying to over-control the phrases. I mean there were one or two problems like I said earlier. They were very much receptive to my conducting, what I was showing and also the verbal feedback that I gave. So maybe problematic will be an over statement. No, huge problems that I recall.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think on a scale of 1 to 10, I would give myself probably around five or four and a half. This brass quartet ensemble doesn't really usually require a conductor but in our case I think I was effective in most of my gestures,

aside from transitions of phrases. I think eye contact and getting my eyes out of the score once that started happening consistently. I believe I was effective in conducting and with rehearsing it. Just hearing, there were no tuning problems. There was not really that much of a need to rehearse as much as there was just kind of running through a few times, just getting comfortable with each other. I would say four and a half I guess. I could because of the level of, the level of the performance. I am always be picky. So, conducting my problems were transitions of phrases and rehearsing just being more adamant.

**Conductor C (Score Study)
Post-Conducting Session 1 Questionnaire**

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

A lot of eye contact with the trumpet player. I left out especially (names the tuba player) and trombone player. I should have made more eye contact with them other than just at the end of the piece.

2. How would you describe your facial expression?

It is getting on better. I used to be not very good at conveying my emotions to my face. I am getting a lot better. It is okay. I think I can do more with my eyebrows to get cues with my eyes. My face and my hands should be working together to get cues.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I don't feel like I did many left handed gestures. I did a lot of mirroring with both hands to convey like the volume that I wanted. But I didn't use my left hand to really convey anything else. I did do one, like, at the beginning. I kind of gave them my hand to show that I didn't want as much. Other than that not much.

4. How expressive was your conducting?

Similar to number three, I felt like I conveyed the style of the piece with the style of my conducting, very flowing, gentle. But other than that there was not too much going on with my left hand. I mirrored a lot. My weak point.

5. What were the musical goals that you tried to transmit to the ensemble?

Well, I did a good job like I said. One of my musical goals was to capture the style of the piece. It said gently flowing and I think my gesture was very flowing and very fluid. I hope that conveyed how fluid I wanted their part. I also tried to do some dynamics, especially during that little part when it said louden. I tried to show that in the styles of my pattern. Do you think I could've done my piano patterns and mezzo piano patterns smaller? Close the box a little bit to show I really wanted it to be nice and soft.

6. Describe the pacing of your rehearsal.

I thought pacing was okay. During the one minute they had to fill out whatever the paper they had to do between the first run-through and the rehearsal. I used that minute to jot down some notes. So during that minute I wrote down some things that I was thinking about in the room with (research assistant) and also tons of things that I noticed during the live performance a little bit. Obviously I noticed some more things: instruments playing rather than just coming from my head. That helps. I had a couple of points I really wanted to track. Right off the bat I knew where to go for the first couple of rehearsal points. After that towards the end I kind of stalled and really didn't know what to do next. I guess I was thinking about you know, what time is my time, when is my timing going to end, how much time do I have left. I really wanted to dwell on this section or should I do this thing which only will take 30 seconds or so. I think it would have been easier if I had seen how much time I had left so that I could plan my rehearsal.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Yes, absolutely. The figures that had three eighth notes and a quarter note and a pick-up eighth note into the next phrase. Those were the endings of the phrasing and really gave me a hard time. I wasn't sure how to place that pick-up eighth note into the next phrase. I ended up just giving a tick at the top of my pattern to show that the pick-up eighth note and then establish the speed of the next phrase. So I am not sure that was helpful or not but it did improve the pick-up note. When I did the first run-through I didn't do it. I just guess I gave a strong one and kind of bounced off the one they can see that. I don't know... that was really problematic for me and I hope that they saw that. It is hardly a good way to do that.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think conducting is one of my weakest points in my teaching right now. So I don't feel like a good conductor. I feel like I doubt myself a lot when I am conducting. I am always thinking. I want to think about how the wind players would want it. Since I am not a wind player sometimes it is hard for me to know when to breathe and how to breathe or how much air that can be used. It is harder for me to analyze those kinds of things because I don't have that experience of playing a wind instrument for 15 years. As far as we got, the style is down. Some of the more technical aspects like rhythm, precision stuff like that we were kind of lost because of my lack of technical skills.

**Conductor D (Score Study)
Post-Conducting Session 1 Questionnaire**

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I thought I had more eye contact with the horn and trumpet player more than with the trombone and tuba player. And as a whole, I probably paid attention to the lower section of the ensemble, the trombone, tuba. I might have worried more too much about the high... the main voices, the melody, instead of the actual tuba holding long notes.

2. How would you describe your facial expression?

I usually don't make too many facial expressions. That is one problem I have. I probably kept the same face during almost all of it. That is my natural tendency. I need to work on that. So I am. I say the facial expression was very plain.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Well, from what I remember not too long ago I actually thought they were pretty good. I got crescendos where I thought I wanted one. I thought they got louder and softer. I mean I would tell the trumpet to back off a little bit and I thought that was great. I probably could have done more. I thought overall the amount of time I had to prepare and just to be conducting... I thought I got a good response to my gestures.

4. How expressive was your conducting?

I am not completely sure. I would say it was okay expressive. I mean where I wanted big crescendos I kind of maybe opened up more and more and just bigger and big. But that was also okay, conducting and expressive-wise.

5. What were the musical goals that you tried to transmit to the ensemble?

I really wanted them to pay attention to dynamics because I knew the trumpet line sort of repeated itself as it was in the first page. That was the same thing. I wanted to make the difference between that and the second time. I told them I wanted the second time a little bit more louder than first time and I told (French hornist) the same thing. She had a similar part... a few more notes in there... any subdivisions the trumpet had with different notes.

6. Describe the pacing of your rehearsal.

I like to start in the beginning all the time just to get back to it before it leaves the mind of the players. Usually with just a short piece I work through it as a whole, kind of look around. Beginning looked around to try to see where did I hear trouble spots that I wanted to hear to make sure rhythm was right in certain sections and I started in the beginning. I, well, with such experienced players, I expected that as soon as I fixed one rhythm they will apply to the rest. They did. They fixed it. I didn't have to go through each single part. Do it like this. Do this. Do this rhythm just like you did before. They pretty much knew. I kind of just went through to the end. I thought I was okay. I should work more, even though, with the full group as a whole, especially lower parts more. It would be nice to do that. So I think pacing could have been a little better.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Honestly, I did it linearly. These guys were pretty good. They were pretty good. They were top of the game. I thought it was a very nice piece. There was not anything that was problematic that I could hear.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

It was better than I thought. I really was kind of a little bit nervous. I did not know how good, how confident a player I was going to be, what I will

have trouble with. I thought that they rehearsed pretty well. It was kind of easy rehearsing because they really knew how to just get things right off the bat, with experienced players. Conducting wise they were great. I did it in two efforts. I got it off. I kind of kept the beat going. Rehearsing actually one bad thing I thought was problematic with me. I did it faster than I really intended. I should have gone slower. Overall, conducting and rehearsing it was good it was better than I thought.

Conductor E (Score Study)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Well, I think from the beginning it was not so good. Then I thought I got on, it got better.

2. How would you describe your facial expression?

I didn't have much facial expression to begin with. I know I have to work on it.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Not as effective as I wish they were. I don't think I did a lot. I don't think it was helpful to them or easily understood.

4. How expressive was your conducting?

Again, I think everything got better as I worked with them. I felt like in the beginning I was not so sure I was able to do that.

5. What were the musical goals that you tried to transmit to the ensemble?

I was only trying to get the little parts, you know, the tuba and trombone parts had to be a big thing. I think they understood what I wanted and by the end it worked pretty well. Overall, I think the overarching phrasing was not where I wanted it to be. I tried to attack that.

6. Describe the pacing of your rehearsal.

That one was okay. I wish I was able to get more done. But I thought I was able to get the bigger points.

7. Were there any specific areas of individual or ensemble performance that were problematic?

For the most part, I didn't notice any problems. I wanted to address the trumpet part that was a little loud but I just didn't have enough time to do it. Same thing with the tuba part.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I got them through it. I needed to figure out the last measure exactly what I wanted to do. But I think musically I could've done a lot more. But as far as getting them through it, I was able to do that. And rehearsal-wise I was able to attack some points that I wanted to get through.

Conductor F (Score Study)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think throughout the rehearsal I probably kept more eye contact with the melody of the piece, so the trumpet player while I was conducting. I didn't look at the French horn player unless I was talking to her.

2. How would you describe your facial expression?

I don't think it changed very much while I was conducting. I thought about it a little bit. I don't think I really did anything with it. It could've been more expressive.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think the influence could have been more expressive and bigger with my gestures and with ensemble. After we had rehearsed a little bit and my gestures actually did get bigger, their sound much improved. They responded to it much better.

4. How expressive was your conducting?

So my conducting actually got a lot more expressive. As I went through the rehearsal and I started verbalizing what I actually wanted in the piece and that actually helps my conducting and then all the musicians by that time also knew what I wanted because I already told them. It started off well, but got better.

5. What were the musical goals that you tried to transmit to the ensemble?

Really, I was just focused on dynamics, following dynamics, and balance. So making sure that the melody was heard, dynamics were really kind of captured, and the balance was equal so that the melody was always louder, mostly, than the rest of the voices. I probably could have worked a little more on phrasing. I guess that was conveyed a little bit in my conducting but I never verbalized that.

6. Describe the pacing of your rehearsal.

It was very well played. It was not too slow. Everyone was playing a lot for the most part. Then I started running out of things to do. So, it got a little more slow because I was thinking of what to do next.

7. Were there any specific areas of individual or ensemble performance that were problematic?

There were not, really, any big issues when I first got them. I guess at the end I worked on lining up the rhythms with tuba and trumpet but there was not anything big or huge that I could hear.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I probably could have been more effective, um, if I had a better goal in mind of like how I wanted the ensemble to actually sound in the end. I don't think I had a clear goal in mind. But I did think they improved over the rehearsal, especially with things like the dynamics, even in the short rehearsal we did have.

Conductor G (Control)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I would say I kept really good eye contact with the ensemble. I was not looking at the score very much at all but my eye contact was where it needed to be. A lot of time I was looking away from the first trumpet when we needed to make an entrance. So really good eye contact... just the way I wanted it.

2. How would you describe your facial expression?

I think I was generally pretty calm in my facial expression to get the piece. I was more or less using my face to show breath. I was exhaling with the ensemble at the second phrase.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think it was actually equal parts... my gestures influencing the ensemble and the ensemble influencing my gestures. I was reacting in a way to the style they were playing and it seems like they were pretty set on a style after they played it through a few times. So I didn't feel like I did a whole lot to change the style they were playing.

4. How expressive was your conducting?

I think it fit the style of the piece like what I was saying before. Pretty flowing, a change with the ebb and flow of the piece at the dynamic peak. I think pretty expressive. No spots where I might have looked low or flustered because I was at an end of a pattern where I was thinking more about line than about straight pattern.

5. What were the musical goals that you tried to transmit to the ensemble?

I think just connection of phrases we talked in our rehearsals about where we breathe and what spots change in tempo and dynamics. So I just wanted to be true to the melody and really played to the phrasing that was written.

6. Describe the pacing of your rehearsal.

Pacing in our rehearsal was appropriate. I think not too fast, not too slow. I heard trombone & tuba one instance. I heard horn and trumpet at one instance and tried to work on transitions from one phrase to the other, which really kept the activities rather brief. I think it was pretty well placed.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Not problematic in the sense that they were playing any errors or playing anything lacking. There were some spots that I was not exactly sure how to show. For instance, the measure for trombone and I think trumpet have a break in their phrase mark and they tend to. Horn and tuba carries through. So it is tough to decide where to let them breathe. Let into the next measure. I think there are a couple of issues where I thought one instrument has to come out more. I just gave one dynamic to the group and they followed that very well. Nothing else I can think of that is problematic.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I didn't feel like I had a whole lot that I needed to do in the sense of correcting or in the sense of getting them to play musical. These are all very great musicians. It improved slightly. I think the clarity of my thought improved from the first run-through to the final run-through. I can't say at the moment if I like my musical performance last time. It is pretty solid throughout. So I feel it helped to have such good musicians to conduct. So I just let them do their thing, let their musicianship and their understanding and phrasing come out. So it was pretty successful... pretty enjoyable experience.

Conductor H (Control)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I don't think I really used as much eye contact as I should have in trying to get what I wanted to. I thought there were moments that I did but overall that was just something that I might not have done.

2. How would you describe your facial expression?

I want to say it was in the style of what I wanted but most of the time my face doesn't show exactly what I am thinking. I thought I was good though in terms of the style and the expression that I wanted to portray.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I thought they were quite effective. I thought they were more effective after I had time to rehearse the ensemble and had a better understanding of what I was doing about the music.

4. How expressive was your conducting?

It is kind of belonging to the lines as question 3. I think that my gestures were effective in portraying what I wanted to express in the piece as a whole and phrasing, dynamics, and tempo variations.

5. What were the musical goals that you tried to transmit to the ensemble?

Dynamics, phrasing, musical direction, general style, dealing with the piece.

6. Describe the pacing of your rehearsal.

I thought that the pacing was good until I got to the point in which I was not sure what else to work on with the ensemble and, but outside of that, I thought the pacing of the rehearsal was pretty good.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Not particularly. I thought the balance was pretty good except that some of the lines that I specifically wanted to bring out did not come out the first time that we played through it, but those were the points in which I identified and worked on during rehearsal time.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I felt given the circumstances and the amount of time I had to look at the score and the amount of time I had to rehearse I thought that the

performance was pretty effective and expressive. So I think my conducting and rehearsing the ensemble was, overall, really good. That is it.

Conductor I (Control)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think I had pretty good eye contact towards the ending. Maybe at the beginning I was looking more at the score. I tried to make sure they were playing everything correctly. I think during the rehearsal I did more eye contact. So I think towards the ending eye contact got better.

2. How would you describe your facial expression?

That is something I try to work on. I need to work on it more. I have been told that I have a pretty blank face when I conduct. So I have been trying to smile more and show more emotion when I conduct. That is something to work on.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Since it was kind of in six-eight and there were not many dynamic changes, I didn't feel like that many gestures were needed. Something I try to work on is left hand gestures, but I did not have that much time. I didn't really know exactly how fast or slow to conduct. I don't know if I used that many left hand crescendos. That is something I can work on for next time.

4. How expressive was your conducting?

It kind of goes along with number three. I think it got more expressive as I got more comfortable with it especially in the final run-through. At the beginning I think I was mainly conducting time. So, again this is something I need to keep working on, especially with six-eight in particular, a little bit harder I think in finding the right ictus point in your baton. So I was trying to mainly focusing on keeping the right tempo and, I don't know, it could be as expressive. I will work on that for the next time.

5. What were the musical goals that you tried to transmit to the ensemble?

I tried to...they were already doing a great job with musical goals, er musicality...no intonation problem. I guess I was trying to abide by the written markings on the musical score and I think I did a pretty good job of getting faster and slackening. I think the trumpet came out pretty well and I rehearsed the bottom two lines pretty well. They were pretty much perfectly together. They had done their job already.

6. Describe the pacing of your rehearsal.

I don't think they need that much rehearsal because they are very good players. So the pacing went maybe a little fast, because I had a lot of time left at the end. I just couldn't find that many things to work on because I thought they were doing a really good job and mainly the things I need to work on are personal things with my own conducting and not with the ensemble.

7. Were there any specific areas of individual or ensemble performance that were problematic?

There is one time that the trumpet played the wrong rhythm but I told him and he was just trying to make sure I caught it and that and just merely the tempo was getting faster and slackening...which could be fixed by clear conducting. So there were not that many specific, problematic areas.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think I was pretty effective. They were already doing well and with any conductor, as long as they were giving a stable tempo, I kind of believe that they will do well. I think I showed some good gestures. I think the thing that will help me the most is practicing in front of a mirror. I haven't practiced that much this semester so I am definitely a little rusty. This is definitely a wake-up call to go practice in a mirror and make sure I can be musical and expressive and all of that.

Conductor J (Control)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

From the first reading I thought I was looking at the trumpet a lot and by the end I feel like I was giving everyone pretty good attention and I wasn't looking at the score probably at all because I was listening to the music at the first reading specifically.

2. How would you describe your facial expression?

I feel like it got better after I conducted once again. Personally, that is something that I have been really working on because through my conducting classes it was always pretty flat. I am trying to be more expressive and I feel like I did all right by the end.

3. How effective do you believe your gestures were in influencing the ensemble sound?

The pick-up, though, wasn't happening exactly as I would have liked and I didn't stop and talk about it because I was just thinking it may not be clear. But as far as individual gestures, I motioned for (tuba player) to play out a little and he did and I didn't have to talk about. It went well.

4. How expressive was your conducting?

I think it could have been a lot better. I have kind of fallen into doing mirroring stuff that I didn't used to because that is kind of stuff middle-schoolers need. I think I could've done a lot of phrasing stuff with my left hand. So I would say that I don't believe my conducting was very expressive.

5. What were the musical goals that you tried to transmit to the ensemble?

I think balance and just moving together. They are amazing players. So they already had most of them together. It has been a long time since I worked with any one that I could be that picky. So just being together.

6. Describe the pacing of your rehearsal.

It was a little strange because, first of all, it was so short and second of all they were so good at it that I didn't feel like I had a lot of rehearsing to do. So I was trying take extra time to do what they already knew. But I had five minutes. So I think the pacing was pretty good. I didn't have to sit there and not say anything.

7. Were there any specific areas of individual or ensemble performance that were problematic?

By the end they got it. I think just trying to decide personally how I wanted the last few measures to sound after talking about it, they understood it. So that was the only thing that came up during the rehearsal.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think I was effective because they, at the end, performed with my mental idea of what the music was.

Conductor K (Control)
Post-Conducting Session 1 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I thought I had good eye contact, especially with the first trumpet player at the beginning. It really established the pick-up note. I felt once we got going I was sure to make eye contact with (states French hornists name) so that she would bring out the melody and to try and make them equal parts. When I was working with low brass and the rhythm, I made sure I really engaged them with my eye contact. At the end, I made eye contact with each one of the members of the quartet.

2. How would you describe your facial expression?

I felt that my facial expression was contrasting at the beginning. I think I had more of a serene face and then we got into the middle section and it was a little bit louder. I might have changed my face and as a result the ensemble played louder and before and after I naturally smiled at the ensemble's reaction.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think the most effective gesture I had was when it went mezzo forte to forte at measure 9. I really especially heard a difference in ensemble sound, as it is fuller and louder. So the larger gestures definitely helped. I think so. My left hand gestures were a little bit ambiguous. So I was trying to get a little bit more melody. I didn't quite hear it that way. That was more because I was just floating around. I think the most effective gestures were definitely just dynamic gestures for the overall group.

4. How expressive was your conducting?

I think my conducting was very expressive. I had a nice smooth line with the right hand with a wide left hand. Sometimes left hand was just not very effective. It just kind of sat there. But I think between the facial gestures and the intensification of the dynamics, it was there. I think it was pretty expressive.

5. What were the musical goals that you tried to transmit to the ensemble?

The number one musical goal was obviously the contrast and then just to make sure that trumpet and the horn can really have this nice duet. I wanted the trumpet lines to really sing out of the texture over the other lines. Very simple understated melody to be guided by the contour of the line. All the parts work together because everyone can have little interesting parts here and there.

6. Describe the pacing of your rehearsal.

I thought the pacing was pretty decent. Towards the end of the five minutes, I felt that I was kind of running out of things to work on but then once I really listened, I thought I heard different things. I thought I was effective studying measure 9 because that is where the timbre changes... lining things up was a little bit tricky. Once we tackled that, going back to the beginning was no big deal because we had already tackled the harder parts. I got the ensemble pretty good and then was able to work on some detailed work for instance (states French hornists name) balance, and trombone.... the trombone and tuba matching of rhythm and I felt like all the members of ensemble were actively engaged and comfortable the whole time.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Most problematic ensemble issue was lining up of the some of the rhythms. Entering the timbre changes... really making sure that everyone was lining those up together. I think the last run-through was definitely a solid one. The rehearsal, when we went through it, it was ninety percent there. So that was the most problematic issue.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I believe my conducting, as far as the expressivity and the musical intention, was very clear. The correct idea was necessarily true but they played the concept that I had. So in that aspect I think my conducting was effective. I think some of my pattern got wishy-washy. I was too slow in flowing but the overall effect was pretty good. I think the rehearsal was pretty effective. I had three goals set. For instance, working with the tempo, working the rhythm alignment, making super starts together. I felt that I was relaxed. I was communicating well with the musicians, especially through eye contact. My head was definitely out of the score eighty-five percent of the time. I guess points to work on would definitely be clarification of the pattern. I think when I put a little more click on it there was definitely some clarification from the ensemble's rhythm. And, of course, expressivity of the left hand...figuring out what I can do with the line.

Appendix F

Score Familiarity Test

1. What is the initial tempo marking?
2. Please write in the correct rhythm for the trumpet and French horn parts in measure 3 on beats 4, 5, and 6.
3. Which measure of the piece features the only written crescendo in all parts?
4. What is the written tempo indication in measure 9?
5. Which instrument in measure 12 has the only non-diatonic figure in the entire piece?
6. What is the written dynamic indication for the French horn, trombone, and tuba parts in measure 13?
7. The fermata occurs on what beat in measure 16?

Appendix G

Conductor A (Score Study) Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

A lot of my eye contact was towards the trumpet and French horn just because they had the more vital parts. I had eye contact with the tuba a few times to bring him up and I made eye contact with trombone at the point where he had the B-natural climatic figure there. Overall, I would say I made eye contact with each member of the ensemble although I did slightly favor the trumpet and French horn, but I think they had all kinds of eye contact in that way.

2. How would you describe your facial expression?

My facial expression was probably fairly similar the entire time just because I really tried to convey the character of the piece in my facial expression. I don't really feel like that piece calls for exaggerated facial expressions on crescendos and decrescendos all that much. It is more of a nice calm flowing piece and that is what I was trying to convey.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think they were quite effective. I didn't have to tell the horn player to hold through between measures 4 and 5. All I had to do was give her a push through with my left hand and she went all the way through... that was nice. I don't know if she has been doing that for everyone or if that was just a response to what I did, but I felt like that was effective. I did the dynamics mostly with eye contact, sort of just kind of pushing my will out there. I think my gestures were pretty effective on the whole.

4. How expressive was your conducting?

I felt like my conducting was very expressive. It was nice and smooth like the piece called for. I did some dynamics with my left hand but not too much because the dynamics weren't that drastic. I mean my dynamics clearly dictated the accelerando, ritardando, cause it came out exactly the way I wanted in my head, so I guess they are really good at following someone or something, but I suppose my conducting was fairly expressive.

5. What were the musical goals that you tried to transmit to the ensemble?

I was just trying to get them to hold through to their phrases and to follow the contour of each other's lines. All I had to do was my stylistic preferences... I feel like I got those goals done.

6. Describe the pacing of your rehearsal.

The rehearsal was quick. I did not feel like they needed all that much. Maybe it's just because I wasn't all that opinionated but I felt like what sound they were producing was exactly the sound I had in my head. I didn't really feel the need to do a whole a lot of rehearsal. I feel like they moved pretty quick so that's usually good. I just didn't see the need to fill up that last minute and a half.

7. Were there any specific areas of individual or ensemble performance that were problematic?

There were not. I just didn't think there were. They were all really good. Could have used a little more tuba sometimes but he was good. They were all good.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I felt like I was extremely effective because what I ended with was exactly what I wanted to end with. It sounded exactly what I wanted it to sound like. A lot of the rehearsing has already been done and they are all already good at playing that piece. So, there wasn't all that much I wanted to do with it. I felt like I was good at effecting the individual changes that I wanted.

Conductor B (Score Study)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Effective, I guess. Eye contact with individuals was better with ensemble as a whole. Once again, I kind of left out (states tuba player's name). I feel like eye contact was pretty good individually throughout.

2. How would you describe your facial expression?

I would describe it more as a reflection as of what I was hearing more than the actual phrase structure that I wanted. Especially during one of the rehearsal times when the trombone was a bit sharp and adjusted. I think that was probably one of my most involved facial expressions.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think it was pretty good. I think we had a good feel of the phrases once I remembered to make my conducting patterns a bit looser and we got a better sound I feel.

4. How expressive was your conducting?

Probably not as expressive as I would have liked. I think because the A section repeats itself two more times I was most expressive the first reading and then you know the B section is pretty easy to get into, you know, because of all the tempo and dynamic changes.

5. What were the musical goals that you tried to transmit to the ensemble?

This time I really was trying to bring out not just melody parts but harmony parts that were important...the trombone, tuba pedal changes. (States French hornist's name) lines into the A section I tried to make more apparent.

6. Describe the pacing of your rehearsal.

I felt like it was a lot better. I knew what I wanted. I knew what I wanted to hear this time. I was able to listen more critically this time. We always had something to work on. If something sounded good and I wasn't sure what to work on, we just played on until I found something and no problem.

7. Were there any specific areas of individual or ensemble performance that were problematic?

No. Transitions between phrases were a lot better. But I feel that once I obviously stated that "Hey, I don't really want to go that fast there" I feel pacing in between phrases were a lot better and that was really the only thing we needed to work on. I feel like there is good ensemble unity.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I am going to use my scale from 1 to 10 and give myself an 8 this time, because I do know what I wanted to hear this time and wasn't just waving my arms about waiting for the magic to happen. Conducting was a lot easier. I feel like I established a better connection with the ensemble this time because I knew what I wanted because I was a lot more clear... rehearsing the same thing. I was a lot more clear and I was able to tell them without hesitation or without convoluting my idea. I guess that's it. Thank you.

Conductor C (Score Study)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Compared to last time, I thought my eye contact was much more meaningful. Like I looked at (states trumpet player's name) when he had an important part that I wanted to make sure that he got. I looked at (states French hornist's name) for eighth notes at the end of the third phrase leading into the next one. It was more and not just for the sake of just making eye contact, it was because I wanted to guide them through a part or make sure they were with me... whatever. I did find myself looking at the floor because I had an idea of how I wanted it to go in my head and I was thinking about it and not paying attention. It was weird, and I caught myself a few times doing it and tried to fix it but I did catch myself doing it a few times, which is not so good.

2. How would you describe your facial expression?

I thought it was okay. Nothing to write home about, but it's not like I used any. I am sure we will find more when I look at my tape, but I felt like I raised my eyebrows a little bit and I breathed and stuff like that, I guess. I don't know. It is just such a short piece and the same style, so maybe my facial expression reflected that, I don't know.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Like I said before on my last recording, I think I reflected the slowing flowing marking in my gestures. I thought it very flowing, smooth legato. I think I could have done more with my left hand maybe to facilitate the

crescendo and decrescendo in the third phrase and instead I just did a lot of mirroring, which is usually not what you want.

4. How expressive was your conducting?

I think my physical conducting plus my facial expression kind of conveyed my expressiveness to the ensemble and I think the combination of the two contributed to that. It's just a short... it's only sixteen bars. It's just a short excerpt so there isn't a whole lot to do with the different styles. The one style I did portray I thought was very expressive.

5. What were the musical goals that you tried to transmit to the ensemble?

Well, I had a lot more goals than last time, that's for sure. In my five minutes of conducting, I am sorry to rehearse the ensemble. I feel like I had so much to go over and last time the first conducting round when I did that, I underestimated that it was only sixteen bars and I didn't know if there was much to go over. This time, with the added score study, I had way more to talk about and emphasize in those five minutes. Specific musical goals, I guess. I wanted to make sure everyone was clear on the transitions and that they were slowing down. I really wanted to work on the third phrase because I think that's the part of the music that really needs to be clear so they know what I want and how to play it and how to get it across. Also, the ending I wanted to make sure it was softer than the first two phrases which (states trumpet player's name) did beautifully. I wanted to make sure it was softer and everyone knew how I wanted to do the ending.

6. Describe the pacing of your rehearsal.

I thought it went really well. The last minute, I didn't really know how to deal with the last minute, so I just wanted to do a run-through and then I ran out of time but I would have gone on to the trombone part with the trombonist and made sure that he was bringing out that accidental but I didn't get to do that.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Yeah, there was still and I didn't know why I didn't say anything about this. Maybe cause I didn't know how to fix it. (States trumpet player's name) was coming in just a little bit late on all of his pick-ups and it wasn't a true eighth note, it was almost like a sixteenth note pick-up.

(Sings the trumpet player's pick-up notes). It happened almost every phrase. Maybe probably its cause I was unclear about that and its hard to come in on that small subdivision with so big of a beat being showed. I was going slow too and he would have had to subdivide through all of that one, two, three, four, five. I thought it would have made it easier on him if I would have given him some indication of when to come in. I know I talked about it on my last recording, still having trouble, but overall I think it went better on that part. Were there any other problematic things? I'm trying to think, yeah the rest of it went okay. The first run-through as soon as I mentioned what I wanted to do differently, they adjusted very quickly and they are a very good ensemble. They got the rhythm, they tuning was right.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

This time I felt so much more comfortable with the piece. I knew how all the parts went and how all the parts contributed to the piece and I was more familiar with the different phrases and how each phrases contributed to the excerpt and how it functioned. I think I was way more confident. I think that showed in my conducting. I would be interested to see how, I don't know if we get to see comments that the ensemble wrote, but I would be interested to see how they felt it went, because I definitely think it went a lot better this time.

Conductor D (Score Study)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Felt it went better this time. I had, I had more contact with the low brass this time. I felt like I completely ignored them last time. I felt especially in the trombone where he has the B-natural, I really just looked at him more just to bring that out a little bit more. And then, you know, tension in the root of the resolution with the chord. So, I don't think its maybe where it should be, but I felt it went better than last time.

2. How would you describe your facial expression?

There was more expression this time in my face. I felt myself doing something I hadn't done before with my face. Just certain parts when they come in but you know just bring it in, kind of a soft face; you know I don't want to say soft face, you know, slowing, flowing face. I think I had a bit

more facial expression. I didn't think there was much facial expression. I think there could be a lot more.

3. How effective do you believe your gestures were in influencing the ensemble sound?

As always, as last time, this ensemble really responds really well. I felt when I asked for more with my hand they would give me more and when I say to them to back off, you know, when I would show them to back off they would back off. I think they really responded really well to my gestures.

4. How expressive was your conducting?

It was okay. I didn't feel it was extremely expressive. It might have been, I don't know. I think it was slightly kind of mechanical a bit. Not the way a good, like a really more experienced conductor would have with his baton.

5. What were the musical goals that you tried to transmit to the ensemble?

Musicality, bringing out individual parts, dynamics, you know, just resolutions and stuff like that. I felt it went really well with the goals I had in mind and I felt a lot of them were accomplished.

6. Describe the pacing of your rehearsal.

It's kind of difficult to pace it because they know the parts so well. It was kind of difficult to tell them, you know, let's fix this or let's fix this because it's almost all really good. So, I just kind of worked on stuff for me actually, you know, slow down, there were some parts where I worked on trying to get the French horn to come out. I felt the pacing was okay.

7. Were there any specific areas of individual or ensemble performance that were problematic?

No, no, a simple no.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I felt I did a pretty good job. Went better than last time. But at the same time, they were more prepared, considering last time they were really good and now they are just even better. It sounded amazing, it's kind of hard to rehearse when they're literally almost nice. It's a good sounding

piece overall. I think it was pretty good. I felt better with my conducting. I felt more comfortable. I felt there was more musicality in my conducting overall. I felt it was a more convincing rehearsal this time, even better than the first.

Conductor E (Score Study)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I felt like I was pretty good about that. There were a couple of times that I wish I had paid a bit more attention to the trombone player but I felt like I had a lot more eye contact and they paid more attention to me.

2. How would you describe your facial expression?

It was pretty much expressionless. Still, umm, I felt like I did a little more than before, just because I knew what I wanted a lot more.

3. How effective do you believe your gestures were in influencing the ensemble sound?

A lot more effective. It definitely changed what I wanted and grew and got softer when I wanted them to, so a lot better.

4. How expressive was your conducting?

I was definitely more confident about my expressiveness. I felt like there were a couple things I could have done a little bit better, especially my last run through. I felt like my last measure was a little bit confusing. I felt like they understood what I was doing, so I hope it was okay.

5. What were the musical goals that you tried to transmit to the ensemble?

I really wanted them to know that I was doing two measure phrases at the beginning. The biggest thing was really making them comfortable with 9 through 12 and how I wanted it to go as far as getting faster and them really making the high point beat 6 in measure eleven to measure 12 and more comfortable for them.

6. Describe the pacing of your rehearsal.

I felt like it went really well and felt like I had all the time I needed so I thought that was good.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Nothing was really problematic. I felt like at times they were a little bit too unsure of what I wanted or I felt like their playing was a little bit timid at times, which I guess I could have addressed a little bit better if that was the case.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I felt a lot more confident knowing the score better. I felt like I got what I wanted across and knew the score a bit better and I felt like I could have done a bit more with my musical ideas, but I think I was pretty effective.

Conductor F (Score Study)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think for the first run through I didn't really look at anyone cause I was concerned about the music or scared of messing up or something. Definitely later on I felt like I had more eye contact with people. I think I was better this time about looking at people when I wanted them to play out or when I felt like their part was important.

2. How would you describe your facial expression?

I think it was not as expressive this time as last time, I'm not sure why. But I was definitely more relaxed as I conducted and rehearsed a bit more my facial expression started to characterize the piece and what I wanted more.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think it was pretty effective. Like, I think my breathing got more of a reaction from the ensemble... yeah. But I guess I didn't do too much

gestures either. Kind of mirrored a lot with left hand and I wish I would have done a lot more phrasing and things like that.

4. How expressive was your conducting?

Yeah, same thing. I really wish I could have done more with my left hand. In general with my conducting I think I need to work more with my left hand and being more expressive. I think from last time I cared more about the music and like I said I felt I was more expressive last time, I don't know.

5. What were the musical goals that you tried to transmit to the ensemble?

Definitely wanted to work on phrase ending and I thought that was a really important part of the piece and I guess I worked on that before. And I wanted, I wanted to slow down sometimes and, yeah yeah, I definitely wanted to lead into next phrases I guess.

6. Describe the pacing of your rehearsal.

I thought it went really well. I was surprised cause I took one phrase at a time and by time I was done I had a minute left so we could run it through and then run it through a final time.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Not really. The ensemble did everything I asked them too. I didn't really catch any mistakes or anything. My last run-through the trumpet was running out of air so it was hard for him to slow down.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think I was more effective than last time. I had more to say, I felt like I knew more about the music and I knew what parts I wanted to be brought out. I had a better idea of what I wanted it to sound like. I felt like I had more to say during the rehearsal.

Conductor G (Control)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think last time I commented that I did not look at (states tuba player's name) enough and I think I looked at him when it mattered...when he had the moving notes. In general, I think I kept good contact mainly with the outside voices, trumpet and tuba.

2. How would you describe your facial expression?

I have been told when conducting choirs that my face looks tense and I furrow my brow. I was making an effort to combat that, but I still had some facial tension and tension in my breathe. So I was trying to transmit some feeling of calm. I don't know if that came across to the ensemble.

3. How effective do you believe your gestures were in influencing the ensemble sound?

Once again they were a very polished group so I think I accomplished more verbally than I did gesturally, if that makes sense. I accomplished more through telling them what I wanted them to do then actually showing them. I thought my control of the cadences was very good because I was subdividing and I felt very in control of tempo. I think my two pattern was lacking so I am stilling playing around with that. How exactly I want it to rebound, how I want to show a broad pattern and still keep it in tune.

4. How expressive was your conducting?

Again I think the pattern got in the way. I was thinking too much about what my hands need to do. I think it fit the style of the piece. It was fairly smooth but still could use some improvement.

5. What were the musical goals that you tried to transmit to the ensemble?

I think I mentioned it before. Feeling of calm, very smooth style. I talked quite a bit about balance within the ensemble. I know that the instruments were marked at different dynamic levels at the same time. Balance, I mean not having an instrument pop out of the ensemble sound too much. So I think style, balance, definitely keeping tempo under control, speeding and

slowing down as a group together. Also getting that internal pulse locked in.

6. Describe the pacing of your rehearsal.

Not enough of a plan. I was mainly just running sections and while I was doing that I was trying to fix gestural problems or things that I think was lacking in my first conducting performance, so I just corrected problems as I came to them. Don't think I had a good feel of time, how long exactly 5 minutes would be. So, the group was occupied, but I don't think it was as focused or as goal-oriented as it could have been.

7. Were there any specific areas of individual or ensemble performance that were problematic?

I think there were some unintended balance issues, tempo issues as well with one person not quite matching the group. The trumpet player I mentioned was a little bit ahead of my beat and some areas where one instrument was too much or too little. All very expressive musicians.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

My rehearsal was more effective this time. My conducting was so- so. So I knew what I wanted I just think I could have done a better job of showing it gesturally. It came out verbally, like I said, but my intentions didn't come out with the gestures.

Conductor H (Control)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

Thought it was pretty good at times as I looked at the people whose line I wanted to bring out. I thought it was effective.

2. How would you describe your facial expression?

Think I could have been more expressive or more relevant to the style that I wanted, but I don't think it took away from the performance.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I believe they were quite effective. They played how I wanted them to. They did little musical ideas that I showed them.

4. How expressive was your conducting?

Goes along the same lines as three. I think it was at least moderately expressive, unless they were doing that all on their own.

5. What were the musical goals that you tried to transmit to the ensemble?

Of course there was musical line, shaping, dynamics, balance, etc.

6. Describe the pacing of your rehearsal.

I thought it was okay. I sort of ran out of ideas on what to do at the rehearsal, what to work on. Nearing the end of it, it wasn't good pacing cause I didn't know what to do.

7. Were there any specific areas of individual or ensemble performance that were problematic?

No, not really. I thought they played well. They responded well to what I was aiming for.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I thought the conducting was quite effective. I thought the rehearsal could have been better planned out along what I wanted. Given that I looked at the score, what two, three minutes before then, I thought it went pretty well.

Conductor I (Control)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think I did a lot more of that this time and was more comfortable in front of them and gave a lot of eye contact especially during the last run through of it and I felt we were more together this time.

2. How would you describe your facial expression?

I think it improved. It needs to improve, definitely, but I think I gave more expression with my face and conducting this time.

3. How effective do you believe your gestures were in influencing the ensemble sound?

I think I definitely gave better gestures this time. I'm still working on left hand independence which is really challenging for me right now. I think at least being able to have my left hand mirror my right hand, it helps me. I don't know... makes me more confident, I guess. I think I was able to make bigger gestures and show how dynamically I wanted it to be so I think it improved.

4. How expressive was your conducting?

Again, I think it improved but still can be more expressive. Kind of goes with number 3 like what I just said. I think it was definitely in the style of the piece. Pretty legato and smooth and I tried to make it small in the beginning and bigger at the end. I tried subdivision with the last measure which helped get more clear there.

5. What were the musical goals that you tried to transmit to the ensemble?

I tried to get the dynamics to be even more contrasting... start even softer and get even louder on the second page. I tried to make it slightly faster, more noticeable in the slackening and the very ending just to get it together and aligned. I think the subdivision helped with that. Overall it went pretty well and we got the flowing feeling that the piece called for.

6. Describe the pacing of your rehearsal.

Pretty fast paced cause I think they are a really good ensemble and could probably play pretty well without a conductor. I did not find many things to work on. I just pinpointed the specific things that I thought needed a little help. Once they got that I didn't see a need to continue rehearsal because they had all ready done what I asked them to do. It was pretty fast paced but I think the rehearsal called for that.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Little tiny things. The last measure together when I added the subdivision. I tried to bring out the trombone on the third line I think and, what else ... and getting the dynamic more contrasting. But no major things, little tiny things.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

Being more confident and trying to show a clear beat and what I wanted to happen instead of just marking time. I think I did more of that and it was effective. The rehearsal was fast paced but it already sounded good and I kind of get annoyed when conductors go on and on and I felt like we could just do a run-through and it would be good and it was.

Conductor J (Control)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think I did better about that this week, looking around to everyone. Once again, I didn't look at the score once, so I felt that was pretty good.

2. How would you describe your facial expression?

I feel like I just do the same things. Like I said last week, it's the biggest thing I am working on. I have to say I was a bit distracted this week. But I feel like I still do a bit better job of being emotive with my face than I used to be anyway. I do wish I could more still.

3. How effective do you believe your gestures were in influencing the ensemble sound?

The first time I asked them to do that swell, I did a pretty big gesture with my arms and they did a pretty big gesture back, but I also said I was going to do that. I don't know what contributed to that. I haven't worked with anyone I can be civil with like my concert band. I have to jump up and down if I want them to get louder, so that was a nice change or a surprising change. At the same time pretty most all of my gestures that we rehearsed I talked about them so its hard to say if I was doing anything just by my gestures or if they just did everything.

4. How expressive was your conducting?

I tried to think a bit more about not just mirroring the whole time. I'm not sure; I kind of would like to see what they wrote about me just to help me out. A lot of the time, I know it's not on this question, but I would stop and go back to rehearse something and I would say that's my fault and I don't ever do that with students. So I think it's just that I feel a little outmatched with these musicians. I don't really know what to rehearse them on and I am just picking spots for me.

5. What were the musical goals that you tried to transmit to the ensemble?

Shaping the phrases and watching me for tempo. Once again, I wasn't always clear on it and they didn't remember that I was subdividing the last measure and it doesn't say that it gets slower but I just kind of felt like that. Getting them to move with me and change dynamics together.

6. Describe the pacing of your rehearsal.

I felt like it was pretty good this time. I think I was expecting them to sound perfect on it. I don't think as much as last time I had to really stop and think about what to do. I think I had an easier time of knowing what to do next.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Just the end not really lining up, really. I would have wanted to work on that a bit more if I would have had time.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think I was fairly effective, moderately effective. Like I said, this whole time, I think I could do more with my hands separately and with my face to convey more emotion than I am currently doing. So I would continue to work on that. Thank you.

Conductor K (Control)
Post-Conducting Session 2 Questionnaire

1. How would you describe your eye contact with individual members of the ensemble and the ensemble as a whole?

I think most notably the eye contact was really good when I was trying to get (states French hornist's name) to play out a little more. I think my left hand might have confused in that case but I definitely caught her eye to try and get her to play out a little bit more. I made sure to make eye contact with every member of the ensemble before playing so I thought that was pretty good.

2. How would you describe your facial expression?

I thought it was varied and more relaxed during the relaxed sections. And, again, a little bit more firm more intensity during the louder sections.

3. How effective do you believe your gestures were in influencing the ensemble sound?

One thing I noticed when I was up there was that the ensemble was very much playing like a chamber group and they were doing dynamics but I wasn't showing them. Most notably the mezzo piano of the last phrase after the slacken I noticed the trumpet player really brought it down but I didn't give any indication with the gestures. But when I did indicate for a big sound they definitely did, but some of the things I didn't give they did on their own. So I don't know if that's necessarily effectiveness or ineffectiveness on my part but that's just something I noticed. I think in getting (states French hornist's name) to play out my gestures was effective and I think the style of my conducting was effective in getting what I wanted to hear. The smooth conducting was effective as well.

4. How expressive was your conducting?

Again, I just think the smooth expressive gesture, combined with facial expression, really got the desired sound that I wanted. They were picking up on little things really well and following me really well in the faster section.

5. What were the musical goals that you tried to transmit to the ensemble?

I think the biggest thing was the contrast between the beginning and middle section. Where the part where it was getting a little bit faster and then slackening off. And making sure there was a definite high point. To me that was a typical arch melody where the high point was that big slacken section and I think that was achieved well on the part of the ensemble. I think the way I showed it was pretty clear. It may not be the way it was supposed to go, but I think I was consistent so I think that went pretty good.

6. Describe the pacing of your rehearsal.

We didn't do much rehearsal today. I just kind of told them a couple of things I heard right off the bat, balance and such. Which were ideas if I had a chance to do it again I guess I would have portrayed in the conducting. I think it was pretty fast, quick feedback, let's play through it and give them an opportunity. I felt like at that point they could play the music. It was just what I wanted to do and I wanted to do that through my conducting rather than verbal feedback and cues. All and all, it was fast paced.

7. Were there any specific areas of individual or ensemble performance that were problematic?

Again, the most problematic issue was between (states French hornist's name) and the trumpet player that fixed itself by the group and by me and it changed. The tuning was quite nice and if I had anything to say I would have liked the 3rd a little bit lower in the trombone on the last note. They played very expressively and really following what I had to do, so they were a great group.

8. Overall, how effective were you in conducting and rehearsing the ensemble?

I think my conducting was pretty effective for the goals that I had. For the big dynamic changes and tempo changes I could have been more effective for the more subtle dynamic changes. For example, the mezzo piano at the end of the third system of the last phrase and I would have liked to do more with my left hand, but I just felt it was a very organic phrase and wanted that to come across. I think my rehearsal feedback was nice and quick and got things very specific, you know, not so round-about. Overall, it was pretty efficient and we had a nice musical, in-tune performance of the sixteen bars at very the end.

Appendix H

Final Interview Conductor A (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

I generally play through all the parts on piano. Um, at least get a general idea of how they go. Ya know, pinpoint the melody, stuff like that, the important parts, things I think need to come out of the texture and try to develop some sort of aural image of what the piece is gonna be like before I go conduct it. Or, ya know, if I have recordings then I'll listen to a recording or something like that, to get a concept.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

When, I guess probably when I can kinda of run through the score in my head beforehand and like sing the important lines.

Investigator: So you get kind of get an overall feeling of what's important and you know you can go from beginning to end or, at least big chunks of it in your head?

Yeah.

3. What are your most important goals when studying a score?

Ah, well, the development of the aural image of the piece is probably the most important one. And, I mean, obviously it is not a complete image. If I don't have a recording then I don't know exactly how everything is going to fit together but I can figure out which line is going to be more dominant during which part. Um, I also want to know... like examine it for any difficulties. Things that could pose problems for the group so maybe I can address those before we start.

4. In our score study, what methodologies did you find most useful?

Um, I liked the playing it through on the trombone. I felt like that was good. I feel like I could almost accomplish the same thing by singing it though. Um and I think singing probably internalizes the melody more than just playing it on trombone. Cause I have to like... just hitting a starting

pitch and then singing it, ya know, as opposed to playing it on trombone, cause I don't have anything to lean on. I have to actually develop the image in my head in order to sing it. I mean I can sightsing sort of, but not as easily I could just sightread it on trombone.

Investigator: So you feel it's important to be able to not only audiate the pitch in your head but be able to produce it some how like singing or playing it?

Yeah, I think it makes it more concrete to be able to actually make the pitch and it helps me, at least, in coming up with an interpretation of the music to actually do it myself.

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

Well I definitely had a much clearer aural image in my head than before because when I was in the room preparing for it basically all I did was I said "Ok, the trumpet is playing the melody, the horn is playing the counter melody." Um, and then I took note of all the markings. It was only sixteen measures so it was pretty easy to create a map in my head of ok, at measure nine you need to point at the tuba and tell him to play louder and also get the group to speed up and at measure eleven you need to slow down. And so, um, I mean I sat there and I sang though the melody and audiated the melody in my head during the five minutes that we had to do the score study but I felt like the other things made it a more complete image.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

6. What differences do you notice between these two conducting excerpts?

The second time I was much more engaged. The first time I was reacting to things a lot more than I was the second time and by reacting I mean I didn't anticipate things so, things would happen and I'd be like "oh." Rather than anticipating what I wanted to happen, you know, making eye contact and saying this is where that is gonna happen and this is how its going to happen, as opposed to the player saying, "this is happening now"... "oh it is happening now." There was one transition in the first one that was really awkward and I think the players were like, "Ok I'm gonna just keep playing." But this time I was much more clear in that. I dunno, I just came in with much more intent.

7. In which excerpt do you feel you conducted most confidently? Why?

Definitely the second one. Because I just knew what I wanted to happen. And so I was trying to make the thing outside my head match the thing inside my head as opposed to having nothing in my head except the melody.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

The second time it was, um, much more frequent. I think I looked down at the score once during the second time but I don't think I really even needed to. I'm not sure why I did. But the first time I looked at the score a few times.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

I think it was maybe a little better in time two. I can't really tell very well the video is kinda fuzzy. And my face isn't all that expressive anyway when I conduct. It's actually something that I'm working on. I think in time two it was probably just a little bit more relaxed.

10. In which excerpt did you feel you conducted the most expressively? Why?

The second one. Well, probably just because I knew what I wanted to happen.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

Um, with the first rehearsal at the beginning I was like "Ah, lets just do something and then maybe I'll develop an idea of what I wanna do once we do something." And with the second one I went in with several specific goals in mind that I wanted to accomplish, mostly with the horn part. So, I kinda went in with an objective as opposed to just being like "Ah, well just go with it. Whatever happens, happens."

12. In which excerpt did you sense the best pacing?

Um, I thought the second excerpt was probably better pacing. I mean, despite the fact that in the first excerpt I didn't really know what I was doing we moved forward pretty fast. I mean, at first it was awkward and then I kind jumped into it and it was fine. But I mean, I kinda ran out of things to work on in the second excerpt. I thought they sounded fine.

13. In which excerpt did the ensemble play the most?

Probably the first one. I think it was just because I was trying to figure out what I wanted to do so I had 'em play a lot so I could figure out what I wanted to change. Cause the first time I was, ya know, obviously when I was conducting I just was like I need to cue this and this and this and this, ya know. That's what I was thinking in my mind. So I wasn't really listening as closely as I should have been in order to effectively rehearse them.

14. Did your musical goals change from one conducting excerpt to the next?

Well at the... During the first one I developed something of a concept of what I wanted the horn line to do cause I mentioned it in the first one. I didn't really chase after it as much as I could have in the first rehearsal.

Investigator: You felt like you were more tenacious in the second one cause you knew what you wanted?

Yeah. Um. I'm sorry what was the question again? ... (Investigator repeats question 14)

Yeah, I mean in the second one I had goals. In the first one my goal was to rehearse the group for five minutes because that's what I was told I was supposed to do.

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Yeah, I mean, I heard discrepancies between my musical goals and what they were doing but I don't think there were really any mistakes per say.

Final Interview
Conductor B (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Um, at first, ya know, look at the title of the piece, um try to figure out ah, from looking at the first page of the score, um kind of, what kind of feeling to get. Tempo markings, things like that. Time signatures. And then I just um, one of the first things I check for is rhythms and how they align; who has what part when. And I guess that's just like a quick scan through. I'm looking at the tempo changes, time changes. Yeah, and then kinda trying to like figure out the melody line.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

Um... when I can sing the piece in its entirety. Um, maybe not... I guess I've never challenged myself to learn every part in it's entirety but, um, especially melodically what's going on and, um, yeah just kind of having the feel of the piece memorized and the melody memorized and stuff like that.

3. What are your most important goals when studying a score?

Um, being aware of um the big changes in the music. Like I said before, time changes, tempo changes when ah, usually stagnant parts move, kind of like in the tuba part in this example. Um, knowing when to cue. Um, looking at entrances and maybe difficult rhythms that maybe my conducting can help with er, ya know. Um, yeah, just ah, those are the only... could you ask the question one more time? (Investigator asks the question a second time). Oh yeah, just being aware of ya know, I guess generally yeah. Being aware of the changes that take place within the music and when they happen.

4. In our score study, what methodologies did you find most useful?

Um, when we talked about ah... I think something that I never thought about that we did a lot was kind of isolating lines and cause I've always looked at things vertically instead of horizontally so, before score study session I never really noticed the horn part leading into the next phrases. Um, so just something that's really helped me is looking at things more horizontally, melodically and not so much are these rhythms lining up.

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

Um, just being more convinced about what I wanted to hear um, ah know which parts I wanted to bring out more. Uh, tempo, we discussed a lot and I had that a lot more solidified, in um, in my mind and what some of the um, written directions in the music meant and how to interpret those and just really analyzing everything I was doing and not just kind of like "ok, well I guess it goes like this" and really well, why would it go like this and kind of things like that.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

6. What differences do you notice between these two conducting excerpts?

Um, even though I am pretty score dependent in both of them, needlessly so, um, there's definitely more eye contact in the second one. There's more ah, right hand-left hand independence, more gestures with the left hand in the second one. Um, also conducting through the transitions were a lot clearer which I know I had a lot of problems with the first time um... yeah um... yeah and just the conducting pattern in general was just um, more um, characteristic of the piece I think and what I was trying to convey so...

7. In which excerpt do you feel you conducted most confidently? Why?

Um, definitely the second one. Um, once again the eye contact and just the clearer gestures um, are the obvious ones, just visually. Um... My facial expression as well like, in the first one it's a nervous smile and in the second one its just kind of like we're having a good time type of smile.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Yes. More in the second one.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

Yeah, like I said in the first one it is kind of like "ah, I hope I'm doing this ok" nervous smile and the second one was a lot more um, ya know, more

this part a little bit more a directive I guess and the, ya know, smiling when things sounded nice, ya know.

Investigator: So you think your facial expression was more natural the second time?

Mm-hmm, yeah.

10. In which excerpt did you feel you conducted the most expressively? Why?

Ah definitely the second one. The first one my pattern stayed pretty much the same through out. There's, this ah, the left hand was mirroring the whole time and in the second one I also, ya know, ah changed my body angle to look at different people so...

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

Um, shorter rehearsal chunks, one is the big thing. They were shorter in the second one and that has to do with me listening better and just focusing on what I'm hearing more instead of what I'm doing. Um, and just asking for more specific things.

12. In which excerpt did you sense the best pacing?

Um definitely the second one... because of the shorter rehearsal chunks. Yeah, in the first one we needlessly played two, three phrases at a time when, ya know...

Investigator: Do you attribute that to you just not feeling comfortable with the music?

Yes. Mm-hmm.

13. In which excerpt did the ensemble play the most?

Um, I would say its pretty much equal but in the second one, I feel like the play was more with a purpose. So... probably the same amount of playing its just the change between me talking and them playing was different.

14. Did your musical goals change from one conducting excerpt to the next?

Yes. Um, like I said earlier shifting the focus from vertical things to more uh like ah... balance ah... balance was fine in the first one but I still felt the need to mess with that and shifting it from that to like lines like (states Horn players' name) ah lines connecting the phrases and then also um I don't remember the trombone player's name... (states trombone players name), um (states trombone players name) chromatic things.

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Yes, absolutely. Um, I barely heard any the first time just because I wasn't used to the music and it's weird conducting it ya know, for a quartet with like a baton. They already know this music they've been playing together and... but still I mean the second time I still found things we could rehearse and make better so.

Final Interview
Conductor C (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Ah well, I would go through all... ya know, I would just flip through the score and I would get a general sense of the piece first and I would...ya know, are there different sections? Ya know, what's the style of the piece? I would get the... kinda the general overview and then ah, if I had infinite time to prepare then heck, I'd do the whole thing and I'd go through, ya know, um... The way I like to prepare a score the first couple times that I rehearse it um when I don't know it that well, I do little sticky notes. Um, and sometimes I rip them into pieces so they're like an inch long and a half an inch thick and I just write something to remind myself, this happens here don't forget. Or I'll write "sax tuning" or "horn melody" or whatever and I'll just put them in the little places so that when I'm flipping through it and I'm not totally visually familiar with the score yet, then I can say "oh this is where this happens ya know, and remind myself. So that's how I do that and then, once I'm more familiar with the score, then I can ya know then I can see a section and recognize ah, where it is in the music, what's happening what has happened, what's going to happen so I kind of know where that falls in the piece and what it should do for the piece. I think is just kind of, everything falls into place the more you rehearse the ensemble, the more familiar you are with the piece, they are with the piece, then you can go farther with it every time.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

Probably one of the best indicators for me is when I can look at a score and sing it in my head. That's a really hard thing for me and I wasn't very good at sight singing, some how I got an A...who knows... but, if, you know, if I'm given a score for the first time it's hard for me to hear the melody, um. And so if I know the piece well enough and I can sing through the melody, and not only the melody but the accompaniment line, and I can hear how it all fits together with out actually hearing it, just visually.

3. What are your most important goals when studying a score?

Well, I mean I want to get to know it intimately so, if anybody has any questions, I know exactly where they're talking about, what they should do how I should answer it. I mean it's just I should know it a hundred times better than my students should er, better than they do, er whatever. And uh... I dunno, I just thing the goal is to intimately know the piece of music so that there's no doubt on how you want to do it, stylistically, tempo wise, anything. There should be know doubt, it should be totally concrete.

4. In our score study, what methodologies did you find most useful?

Ah, you know I thought playing it on my own instrument was really helpful because I'm so familiar with that. Um, however that was, I mean as a percussionist, it's not exactly the same as pushing air through an instrument, so in that regard it wasn't quite the same but I mean it was helpful for me to physically play it so that I knew um, how I as a musician would want to hear it, so that I could then guide the band. I also liked playing on the piano the different parts because that not only focused on the melody but the accompaniment line which like, once again like if I look at it I probably couldn't sing it. And it wasn't ya know, straight up accompaniment. It was kind of a counter melody and not something I heard, honestly, the first time I conducted it.

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

Well it definitely um... I think the first rehearsal or the first little time I had with the ensemble I concentrated a lot on the trumpet because he was the melody, he was the one that I heard, he was the one whose melody I was familiar with. Um... And the second time around I was more aware of what was happening in the other voices and how they supported the trumpet and how they fit, ya know, into what the main melody was doing.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

6. What differences do you notice between these two conducting excerpts?

Um, the first time I conducted I wasn't as familiar with the music so ah, I did look at my score a lot. Um. I didn't look at a lot of other performers other than the trumpet player. I think he was the main person I made eye contact with because ah, again he's the person whose melody I knew the

best and I didn't, wasn't fully aware of what was going on in the other voices. Um I definitely did some more things stylistically the second time um, like I beated out some measures that I wanted, um, it was a little faster. The first time was really slow and watching it now I realize it was probably hard on the musicians to keep the air going and keep the phrasing when it was just so slow like that. The first time I did...because it was so slow they were having a hard time coming in on the last eighth note of the measure before the next...before each um, subsequent phrase so the second time it kind of fixed itself because I went faster. The first time I think that might have been confusing, going into the next measure.

7. In which excerpt do you feel you conducted most confidently? Why?

Second. I just knew what was going on.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Yeah, the first time I didn't have much eye contact at all and when I was looking down at my score.. I think...because I had, only had... I think five, seven minutes to look at the score before hand um, I think I was, that was mainly just to make sure I was in the right place and that I was doing everything in the right bar ya know. Um, the second time I looked at my score...I still, ya know looking at it I looked at it more than I thought I did but I think that time I was comprehending more when I looked at the score and every time I was not only ya know looking at the trumpet part but I was look at how the French hornists part fit in and how the tuba; when he changed, like I looked over at one point cause he changed notes um and I had told him to bring that out a little bit and he did and so I smiled at him. And my...ya know I think I only looked at the trumpeter the first time, eye contact wise. The second time I looked at the French hornist when she lead into the next phrase all by herself, I looked at the tuba when I wanted him to bring out his part, I looked at the trumpeter at the very end cause he was the one that kept, he had those three eighth notes that held over and kind of closed off the piece of music.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

Ah kinda, I have the same facial expression for slow pieces. But it was, I mean it was the second time I think just because I had ah...because I comprehended more.

10. In which excerpt did you feel you conducted the most expressively? Why?

Um, expressively with purpose the second time. Um, ya know I tell myself that I could conduct expressively the first time but, I don't think I was quite sure about what I was wanting to express, so it was just, it was like a general expressiveness.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

Man oh man, I had a plan that second time. I knew exactly what I wanted to work on. Um the second time, I modeled exactly what I wanted, um... by singing, which is not something that I'm comfortable with um, but I think it's the best way that I have of conveying what exactly I want. I think that's the most efficient way of doing that. Um, the first time, like, more that half of my comments were on dynamics and that's one of the first things that um ya know, we learned in Prof. Richter's class it that um, you don't need to tell them about dynamics all you need to do is show it here and half of my comment "lets play that quieter" and then I do the same size pattern. So if I just did a smaller pattern then they're like oh, quieter. So I think I wasted a lot of time, um, that first time. The first time I was ya know at all familiar with the piece but, wasn't as familiar with the piece as I wanted to be and so I just, I guess I was kind of floating through rehearsal and I ya know like, oh this seems like a good place I should talk about let's do that or maybe I should talk about this er let's see how they feel about this pick up note. I knew exactly what I wanted to do.

12. In which excerpt did you sense the best pacing?

Oh definitely the second one.

13. In which excerpt did the ensemble play the most?

Hmm, I dunno. I'd have to SCRIBE it maybe. But ya know, I think I had the ensemble playing a lot the first time because I didn't know what else to do with them. Um, and I felt like I gave a lot of directives in the second one, that maybe I talked more in the second one but, it was definitely more productive.

14. Did your musical goals change from one conducting excerpt to the next?

Yeah, and even my interpretation of the piece changed. Um, I took it a lot faster, um, I had people doing different things than I had had them doing the first time.

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Maybe not mistakes per se, but I definitely heard things, well both times that I could've done better but I think the ensemble was so talented that I mean, they were playing the notes on the page and for the most part they were playing what I was giving them so... That was, I think one of the harder things about this, that they were so good at what they do. I mean they're all ya know, grad students or finished with their undergrad so, they were doing pretty much everything that was written on the page.

Final Interview
Conductor D (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

In a new piece of music, I usually just look it over. Look at all the parts, look at the key, look for major parts in the music. Um, wise, music wise, ya know any markings, tempo markings, just um, specific stuff, ya know and then kind of look at, uh, just to get a feel for it. If there is time maybe getting a recording of it. Look for difficult parts, entrance parts, things where I might have trouble with, aligning parts together, different parts.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

For me that's hard to say, but I think it's hard to say for all conductors, whether you're ready to rehearse. I mean you have to at some point. I feel the conductor even before hearing the piece before rehearsing should already have familiarity with the piece. I mean it may not be the same when he goes to rehearse it but he should already know target points already. What he wants to have and what he wants to do musically and where he is going to have problems and how to rehearse those problems and address them.

3. What are your most important goals when studying a score?

To be honest, to get a feel for the music and let my own personal musicality come out in the music cause I mean it's different upon conductors. It's the conductor's job to really bring out what he interprets the music to do. So really just to bring out my interpretation into the music and to the ensemble.

4. In our score study, what methodologies did you find most useful?

Well, the thirty minute sessions that we had? Hearing the recordings. Getting a feel for the different tempos. Getting the voice part, hearing it sung, was a little different. It gave me a new perspective on it. Um, I mean just going through the line and seeing it as the phrases, A, A, B, A, this should do this, what are you going to do here. Just wondering about when it came to the tempo slightly faster or ya know holding back it really helped me to kind of step back and kind of do what I wanted to do with the music. That's what I felt really helped me.

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

I was more comfortable the second time, definitely and I had a better feel for the score and I definitely had a better idea of what I wanted to do with the music. I wasn't so confused. Specifically, the slightly faster marking had parenthesis I think, it had a question mark, so I was like do I go faster? After the score study, I felt really comfortable going into it and going slightly faster, so that helped me immensely.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

6. What differences do you notice between these two conducting excerpts?

I think it was slower the second time. I felt in the beginning, I think the first time, I still wasn't sure of my tempo. I can see it in my face I was like "uhh." I think the second time I was still going too fast but there was more ease knowing at least I know the slowest I can go and I know I can't go too fast. I felt more comfortable with my tempo. Both times... the differences right? Um, I did react more to the players the second time, ya know. Bring something out, hold something back. So I know right there I got more of what I wanted. I know more of what I wanted to hear in the music. And yeah, I felt like I looked more comfortable the second time. Maybe not to where I'd like it to be but I felt I looked better off in the second one than the first one.

7. In which excerpt do you feel you conducted most confidently? Why?

The second one. I knew more of the score and I could tell just by how I was signaling what I wanted to come out and what not to come out.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

There was a little bit more the second time directly toward specific players. The horn and trumpet specifically.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

Yeah, I felt, I actually felt in the first one like I had a bit more facial expression. I guess I might not have known how to express it, but I felt I guess there's a point where you might give the wrong facial expression, especially for that piece. I noticed during this one part I had kind of an aggressive face. I don't know I had that face. I just didn't feel that was right with the type of music we were playing. In the second one, yeah I had facial expression, it wasn't as much as I'd like to be, but it wasn't definitely not the point of regret of the mean look I kinda gave in the first one. So yeah, overall, I felt the second one was better facial-wise.

10. In which excerpt did you feel you conducted the most expressively? Why?

Actually, the first one. I think since maybe I wasn't there yet I think maybe I was trying to maybe evoke what I wanted through my expressions. Like I said, I made this really big face in one part. Might not have been the right expression in my opinion but, ya know, I just kinda maybe felt there was more expression overall in the first one because I was trying to get a feel for the music and this sounds like this and does this work with that, so yeah.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

The first time there wasn't.... I felt my tempo was more all over the place than the second time. The second time my tempo was more steady. I was more comfortable with it. But what I've noticed is that, I know I was more comfortable with the piece the second time but I know that I have the tendency, I had a tendency the second time to look down at the score more than I did the first time.

Investigator: When you were rehearsing?

Yeah and even on the last measure. Like I knew what the last measure was. I didn't have to look down so much, but I noticed I'm looking down at the score more the second time than I was the first time. The first time I was just really more focused on, don't fall apart, keep it together. But I think the second time I felt I knew the score more. I think I was just looking for things. I can do this here, I know I want this here. Okay, I can

address this here. I was looking for certain measures maybe where I can, um, fix things. Um, more than I was the first time cause the first time I was just kind of, ya know, a blank run through. But, um, I felt I had more attention to detail the second time. I liked it better. I just think I was looking down at the score too much.

Investigator: Anything more about the rehearsal or anything in it?

It was kind of hard because players knew their parts so well and played really well too. As far as the rehearsal... like, I mean, more specifically details when it came to note. The French horn going up into the fourth measure and the fifth measure. I mean that I think I paid more attention to, bring out these notes more than second time than the first time. The tuba bringing out the dotted quarter note after the long pedal that it was holding. I felt I paid more attention to that than the first time. The first time was more dynamics-wise let's get this together, let's get through it. The second time I was like bring this part out here. Just more intricate overall.

12. In which excerpt did you sense the best pacing?

I would say the second one. I knew the part better and at the end, ya know, I felt I had a little less things to work on because they know it so well. The first time, ya know, I was just trying to get through all these things in only five minutes. The second time I felt I was more calm, knew the parts I wanted to work on and actually had a chance to work on a lot of parts I wanted to. Actually got to go back to the beginning. So yeah, I felt the second one was paced better.

13. In which excerpt did the ensemble play the most?

From what I remember I had the trombone play by himself both times. I paid more attention to the tuba so I felt I had them play more. But overall, I would say the second one. I thought I had them play more often than the first.

14. Did your musical goals change from one conducting excerpt to the next?

Yes, in the first one. I remember this actually after you said I don't want to slacken. I wasn't sure about slackening part. I don't know if there was a question or something by it but it made me think well maybe it was just up to the conductor to decide. So I felt like we had one more thing to work on in the five minutes. I wasn't real confident about doing it yet but yeah, you

know, the second time I had to emphasize that and quickening of the tempo after the two A sections and then in the beginning bringing out the French horn parts and kind of making more a difference between the first and second phrase.

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

I actually don't have an answer for that. Hearing mistakes is one thing I need to work on. I would assume so since I had a better feel for it. Yeah, I would assume I had a better ear for the mistakes, but I think also since I had a plan of what I wanted to do and hear, I was more focused on that than actually listening for mistakes. Plus I didn't actually think they would make mistakes.

Final Interview
Conductor E (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Ah, figuring out what the melody is, key signature, time signature, issues that I know the instruments will have or different things that are unique. Like, for example, for me it was the trombone accidentals and everything like that and seeing phrasing and everything like that trying to get a roadmap of it.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

Um, well I try to be able to at least have an idea of how the melody goes. Um, and like I said like kind of an idea of what I want the melody to sound like and then I can kind of ah get my way through it sort of. Uh well, a lot of times I'll try to conduct through while I'm trying to sing the melody and that's kind of... if I can do that and identify and know if there's ya know, certain cues I need to do and everything like that then that usually helps enough to get through the first time.

3. What are your most important goals when studying a score?

Musicality, cause I feel like that's just something we don't talk about that much anymore so, I feel like that's a big thing for me and then um for the, for whoever I'm working with to feel comfortable with me conducting them so that they know that I'm ok if they make a mistake and I'm trying my best and everything like that, and so that they don't feel like I'm just waving my arm and ya know, not really knowing what's going on.

4. In our score study, what methodologies did you find most useful?

Uh for me it was the recordings and probably actually playing, not singing but playing because I felt like that is where I'm most inherently musical and so that was easiest for me. So I guess playing through it would be a good thing in the future.

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

Uh, well hearing a recording kind of gave me a better idea of tempo and what I wanted to do as far as that goes and then playing. Um cause I'm a brass player especially I figured out what kind of the breathing and where the natural decay would happen and so I could combat that if I needed to or let that happen depending on what I wanted.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

6. What differences do you notice between these two conducting excerpts?

Well, the obvious one is that there wasn't a conducting error so, that was ah, a lot better and then, uh my eye contact was a lot better, I thought, the second time, like I felt more comfortable looking away from the score. And uh, the performers actually reacted to me and what I wanted the second time cause I was able to, I think, convey um through eye contact and through my conducting a lot better.

7. In which excerpt do you feel you conducted most confidently? Why?

The second. Uh, knowing the score better, having a clearer idea of what I wanted. Um, actually thinking about different parts instead of just thinking of the general idea but like really taking apart different measures and stuff like that and um I think also familiarity with the ensemble because I knew the players more. I knew what to expect. Um, so I knew where I needed to, I felt like I was more needed and not, then before ya know, I was like I dunno what I'm gonna get I dunno how they're gonna play and everything like that and I at least knew they would come in when they were supposed to.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Yes. It increased a lot the um, second time. It still wasn't as good as I wanted but it was better.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

Uh, a little bit but not much. It wasn't a big huge change.

10. In which excerpt did you feel you conducted the most expressively? Why?

The second one. Um, because I knew what I wanted expressively and I didn't, I had thought about it but I didn't know how to transfer it to my baton. Like I had thought about it the first time, ya know, that it was pretty and everything but the second time I had actually like conducted through it in my head and actually taken the time to figure out ok, well how would I show this and as a player what would I want to see to know what to do.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

Um, well I felt like I talked more in the second one but I think it was because I knew what I wanted to say. Um, and I know at one point I remember feeling like ok, I'm ready to just do it but I still had more time. So I felt like I was able to really go after what I wanted in the second one. The first one I was grasping at straws. Ok, well I know that this is an important part I should, I should do this but I wasn't sure exactly how to go about that. Um, I guess I just really attack the transition, which is what I had wanted to do, and everything. To get them more comfortable with what I was doing cause I know they had done it so many different ways and everything so.

12. In which excerpt did you sense the best pacing?

Um, I would say the second one although I don't feel like it was that different, just because I feel like I was more comfortable um, with the second one.

13. In which excerpt did the ensemble play the most?

Um, I guess probably the second one but I'm not sure. I have no clue.

14. Did your musical goals change from one conducting excerpt to the next?

Yes. Um well, I guess the biggest thing was I guess bar 9 to 12. Um, I did, I really wanted to mess with the tempo a lot more than I did the first time and um, I really wanted, I guess I just really wanted to mess with the piece more as far as like the 4 bar phrase. I didn't want it to just be like a standard four bars like two sets of two. Um, 9 through 12 was like the

biggest thing I remember changing and actually subdividing into six which I had not even wanted to attempt the first time so...

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

I guess, I mean I didn't really figure that it was really difficult the first time. I mean ya know, I think there might have been one or two things that I wish I had caught the second time through but it wasn't anything different.

Final Interview
Conductor F (Score Study)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

That's a hard question. I dunno. I look at the piece. Like think about tempo. Um... look at I guess like possible rehearsal spots. Um maybe like where people would have trouble like lining rhythms up. Things like that. Um, it's usually easier if I've played the instrument before. Yeah and then I guess I try an look at what lines I think are important and what phrase-wise, like what I would want to do with them, and then, um, if I had enough time I would probably thing about like what I would do like in my conducting to like make those phrases do what I want them to do ideally.

2. How do you know when you are ready to conduct and rehearse a piece of music for the first time?

Um, I guess... ok well I guess I feel like prepared to conduct a piece, um, if like I know what I want it to sound like and... um. Yeah. Pretty much like I know how I want things to sound. I want, like I know what I want to hear like what lines I want to hear. Um, yeah.

3. What are your most important goals when studying a score?

Um, hmm. I guess getting through the piece... no... I kinda... I guess it kinda for me depends on like the setting I'm in. Um, like if my ensemble were like a small like beginner group or like... or students that were more like, like knew their instruments better. But um, but yeah, for the most part just like making good music and like yeah having it sound pretty.

4. In our score study, what methodologies did you find most useful?

Um, I thought focusing on phrase endings was really, really helpful for me. Um, and then also going through like each line um, yeah cause I didn't really, like the first time I saw I didn't really pay attention to the French horn line. Um and... turned out it was, ya know, there was stuff in there that was valuable. So yeah...

5. How did this change your thinking when getting ready to conduct and rehearse the piece a second time?

So yeah, it definitely like, um, made me more aware of what everyone else was doing instead of just looking at the trumpet. Um, and then I had a better idea of like how I was gonna conduct the piece because I knew, um, like how like especially the phrase endings like how I want them to go... um... and then that really also helped the rehearsal time and like what I wanted to get done.

“We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions.”

6. What differences do you notice between these two conducting excerpts?

Um, so the first time I was more like concerned about just beating time, um, and like that was it. And then I guess the second time I was like... tried more musical things and like slowing down and messing with tempo a little bit.

7. In which excerpt do you feel you conducted most confidently? Why?

Um, I still think, I guess, yeah... I did better in the first one, just cause I didn't have a little slip up and then yeah. Yeah.

8. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Um, I actually think, I notice yeah, I was kinda surprised I thought I had made more eye contact the second time but it didn't look like I did. It looks like when I did make contact though; I was, like there was more of a purpose for like who I was looking at as opposed to the first time when I was just like looking at someone just because.

9. Was your facial expression any different between the conducting excerpts? In what way(s)?

Um, it actually, now that I look at it looks the same.

10. In which excerpt did you feel you conducted the most expressively? Why?

The second one, definitely. Yeah, like I messed with tempo and I used my left hand a little bit more, um, to like extend notes out and stuff like that.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

11. What differences do you notice between these two rehearsal excerpts?

Um, so the second time I like had a clearer like, I guess, plan of action, um, for what I was gonna do. The first time I just didn't know what to do at all.

Investigator: So you feel it's just you had an idea of what you wanted the second time and the first time you didn't?

Yeah. I was just like, "Let's try and improve this." Er, ya know? Um, I was kinda, I think when I was listening to them go through it I was just you know, trying to listen for mistakes but like nothing was really there. So, um, I didn't feel like I had anything to fix.

12. In which excerpt did you sense the best pacing?

Um, second one. Um, yeah. Um, well like yeah, so I broke it down into phrases and it just worked out really well cause by the time I'd gotten to the last phrase it was like just about time like the five minutes was up and I wasn't grasping for anything else to do.

13. In which excerpt did the ensemble play the most?

Second, I think.

14. Did your musical goals change from one conducting excerpt to the next?

Yeah, so the first one I was just thinking of like having correct rhythms and having like a decent balance umm, yeah, er, like having a steady pulse but like the second one I actually was thinking about phrases and what I wanted the music to sound like and convey.

15. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Um, I don't know cause I didn't really hear mistakes in general. I kinda hear more like listening, like looking at it now but I don't like, yeah, I dunno. Um, I didn't really address any the second time, I think.

Final Interview
Conductor G (Control)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

I try to get a brief overview. Um, ya know, just one scan through, ya know. Look for, ya know, um general key and tempo of the piece of course. Uh, the number of instruments or, uh, voices that it calls for. Uh, I find that my first run through in my head is usually rhythmic. I kind of sing or chant through a lot of the rhythms. And I think the melodic content might come a little bit later. I might do another pass. A lot of times, I have to actually play it at a piano to be able to audiate the pitches.

2. How do you know when you are ready to conduct and rehearse a piece of music?

Um, it's usually, um, much after the first point when I do conduct it. This time I didn't feel like I knew the score inside and out. I think, um, that point comes when I can sing any given part, uh, of the music and I can sing it while I'm conducting and connect the gestures with the sounds. And when I can, uh, get a really clear picture without using any recording or any other type of device.

3. What are your most important goals when studying a score?

Um, discovering the composer's intentions. And of course, in an academic setting, discovering what the challenges will be for my ensemble.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

4. What differences do you notice between these two conducting excerpts?

Most obvious was tempo, um, the first phrase was faster the second time. I started pretty slow with my initial reading of it. And, uh, I was kind of playing around with it, with what an ideal tempo would be. My gestures were pretty weighty at the beginning and I think when I tried to speed it up I got a little bouncier and a little to... I don't know, it wasn't effective and I was more up and my gestures were rebounding too quickly and I was trying to push the tempo alone by doing that, but I don't really think it was effective. The articulation was actually together the first time through, but the second run through it wasn't together.

5. In which excerpt do you feel you conducted most confidently?

The second one, I don't think it was a huge difference, but I knew what to expect from the ensemble, what to expect from the piece. I think I had a little clearer idea.

Investigator: So you attribute that difference just from experience, you just think having done it before?

Yeah, I think so. I had a clearer idea of how the gestures would feel like. I think my rehearsal time was spent on the actual kinesthetic, ya know, how is this going to feel in my hands.

6. Did the amount or frequency of your eye contact change between conducting excerpts? How?

I think it was pretty similar. I think I might have to see it again to be sure. I think in both instances I was, uh, looking at the trumpet or trumpet and horn quite a bit. In the second instance, I was looking at the low brass a little bit more and I don't know what was up with the second repetition but my head was pointed down. It was tilted... it just looked kinda awkward to have my chin pointed down.

7. Was your facial expression any different between the conducting excerpts? In what way(s)?

Pretty similar. Pretty blank and expressionless.

8. In which excerpt did you feel you conducted the most expressively? Why?

I was trying to conduct more expressively the second time. Um, I don't know... I think it was just different. I don't know if it was more expressive, it was just different. Well, I do think that, um, pulls and the tugs of the phrases was more musical the second time through. I think there was better management of the phrases.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

9. What differences do you notice between these two conducting excerpts?

First off, I was still doing score study when I was still at the podium which is not ideal, but you are asking about differences. That's a different topic.

I made comments about, let's see, the emphasis in the low brass part emphasizing the quarter notes. I think I had a clearer picture of what I wanted beyond just what was marked on the page. I had a clearer idea there. I think I used similar rehearsal techniques and similar, uh, methods for getting what I wanted out of the group. I pretty much ran the same sections with the same people. I did the tuba, trombone, horn and trumpet. I tried to approach it the same way I would approach a band rehearsal, ya know, decontextualize it, give some feedback, and try it again and then recontextualize it with the whole group.

10. In which excerpt did you sense the best pacing?

Maybe the first one. At least I had a better, uh, a better perception of time in the first one. In the second video, I thought my time should be up and I still had about two and half minutes. I don't think the pacing was bad. I think the time was well used.

11. In which excerpt did the ensemble play the most?

Time two. I think there was that one episode where I was talking to myself a lot during the first run. I was trying to figure out the breath marks and I was noticing that the trumpet had a different dynamic mark, so that took some time. I was really thinking out loud the first time through. The second time I had them play more.

12. Did your musical goals change from one conducting excerpt to the next?

I felt that they were the same. I thought they were a progression of the same goals.

13. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Uh, well, there were no obvious mistakes like I'm used to in junior high band classes. I mean they were pretty familiar with the pieces. I actually think their playing was improved the second time, either through familiarity or through me being clearer. Uh, I felt like if there were any mistakes quote unquote, it would be certain people sticking out. I talked to the trumpet player about being slightly ahead of my tempo so, uh, ya know just small issues like that and they worked themselves out.

Final Interview
Conductor H (Control)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Um, general score study, so tempo, style, look at the composer and look into the time period that the composer was alive and, you know, general characteristics of music in that time period. Find recordings if they're available of performances of the piece. That's about it. That would be a good start.

2. How do you know when you are ready to conduct and rehearse a piece of music?

I dunno, when I feel that I'm comfortable enough that any question that they will raise I'll know the answer to.

3. What are your most important goals when studying a score?

Um, I mean, I guess, um, any problem areas in terms of either myself or the performers and then the character and style of the piece. Making sure I'm portraying the correct style of the piece.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

4. What differences do you notice between these two conducting excerpts?

Um, time one was just, I thought time one was more of me beating time than actually conducting. Cause I mean, I didn't really know the piece or know what it sounded like so I kind of just winged it. And the second time was more I kind of knew what I wanted with the piece so... a little more so that the first time just by the fact that I actually heard the piece before I conducted it.

Investigator: Anything else?

Along those same lines, I was more expressive in the second conducting time. I thought I had more ideas portrayed in my conducting.

5. In which excerpt do you feel you conducted most confidently? Why?

The second time.

Investigator: Why?

Cause I mean I actually knew what I was getting myself into.

Investigator: You attribute that to the week before you'd conducted and kind of heard it a little bit? So you think it had to do with experience, having done it?

Yeah.

6. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Not that much. No. There was a little bit more in the second time but not a significant amount more. It was more just kinda it never crossed my mind. It was more I was trying to concentrate on other things than that kinda...

Investigator: Rather than looking at the performers?

Yeah.

Investigator: Do think that had to do with not feeling super comfortable with it?

Yeah.

7. Was your facial expression any different between the conducting excerpts? In what way(s)?

Not particularly. But I mean that's been kind of an ongoing problem with me. That my facial expression doesn't really express what I'm trying to express in the music.

Investigator: And again, do you think that may be just because you don't know it well enough or the character of the piece well enough to show it because you're dealing with so many other things?

Well that could definitely be part of it but part of its just I don't have that sort of mental capacity yet in terms of my face expressing what my mind is.

8. In which excerpt did you feel you conducted the most expressively? Why?

I would have to say the second time. The first time I just pretty much beat time, the second time I actually had some sort of tempo change and some sort of dynamic change in there so...

Investigator: So you think you were a little more observant of the markings in the music the second time?

Yeah.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

9. What differences do you notice between these two conducting excerpts?

Ah not much. Um, not particularly, I was always fighting to find something to work on.

10. In which excerpt did you sense the best pacing?

Well, I thought the... that's a tough one... the first one was ok pacing until I got to a point that I couldn't figure out anything else to work on and kind of just froze. And I mean the second pacing was ok but it was more that I was just finding stuff to do again not so much that I was actually working on anything.

11. In which excerpt did the ensemble play the most?

If I took a guess I would say time two but not by much.

12. Did your musical goals change from one conducting excerpt to the next?

Um a little bit, I thought the second time I had more of an understanding of what dynamics and tempo changes went where, but outside of that, not particularly. Kind of changed a little bit but not too noticeably.

Investigator: Do you feel like that's because you still didn't have a real command of what you wanted each part to do because you didn't have enough time spent with it? Not trying to put words in your mouth...

No, no, no. I would say that would be, yeah, a pretty solid reason.

13. Did you find it easier to hear any perceived mistakes when you conducted the second time?

I didn't think that there were that many perceived mistakes going on in the first place.

Final Interview
Conductor I (Control)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Um, well first I look through the whole score beginning to end and see how many parts there are. And this was a smaller one so it was easier to deal with. First I look at the melodic line, I guess, and then see what kind of harmony it has. If it's tonal, if it's some kind of a tonal piece and um... So after I guess, getting the basic sense of... and then how fast it is also ... the basic sense of how it goes tonally, then I kinda look for the more specific things like crescendos or, I dunno, getting softer, getting slower or faster or whatever. But, um, I guess that's the order of things that I do.

2. How do you know when you are ready to conduct and rehearse a piece of music?

Um, I think normally if I'd had this beforehand I would've tried to find a recording of it and maybe like conduct into a mirror or something. I need to do more of that probably so I can actually see myself and um... so I guess a lot of listening to it and then I guess I would be ready when I felt like I knew the score pretty well. Um, yeah, it's kind of hard to answer that.

Investigator: What does knowing the score entail?

Um, I guess the things I mentioned in the first question. Like just going through to know the different parts and where the melody happens and which parts have what.

3. What are your most important goals when studying a score?

Um, my goals are to make something happen with the music and not just be ...ya know ... I dunno, I always kinda look for audience impact and there wasn't an audience in the case but, I always try to do something different with the music I guess, and if I had more time I would've. Well, I dunno, I thought they did pretty well actually. Um, but something different. Contrasts, a lot of dynamic contrast and uh, make a statement with the music I guess.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

4. What differences do you notice between these two conducting excerpts?

I think I had more eye contact in the second one. I dunno, another problem I have is just kind of a lingering left hand. I tend to kind of either want to shadow my right hand or it just kind of like moves, I dunno, involuntarily or something. And I always want to do something with it but I don't really know... I mean like a crescendo or something but then I get sidetracked and it's weird but um... So I guess I need more work on that but um...but yeah, I did notice more eye contact and I think maybe a little bit more expression with the hands.

5. In which excerpt do you feel you conducted most confidently? Why?

Yeah, I guess the second one. There's a little glitch but I think where that glitch happened I might've done something great. Yeah. I definitely felt more confident.

Investigator: Do you attribute that to just having done it again?

Yeah and actually reading your questions uh, when I went back and did the little recording thing the first time it asked about eye contact and stuff and I was like, "Oh I really need to think about that."

6. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Uh, yeah.

7. Was your facial expression any different between the conducting excerpts? In what way(s)?

I don't know about that. Um, I tried to smile some but yeah, that's another thing I need to work on is like making an expression that goes along with the music without looking goofy...so I don't really know how to practice that, but yeah, I dunno. I tried.

8. In which excerpt did you feel you conducted the most expressively? Why?

Yeah, I would probably say the second one. Um, the confidence and knowing the score better and knowing little places to look for actually.

Like that little quiz thing or whatever, I guess I paid more attention and tried to see exactly where things happened.

“We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions.”

9. What differences do you notice between these two conducting excerpts?

Um, I guess the second one was faster pacing. Um, I felt more confident in the second one I know that. And I was thinking about more things like the subdivision at the end and just how to make things clearer cause I think in the first one just a lot of tempo things that were not as clear as they could have been. Um, so I guess that comes with knowing the score better and using more eye contact I think. And I think in the second one I did a lot more left hand shadowing which made me feel more comfortable cause I wasn't just hanging there with nothing and... so um what else... And I guess I focused more on dynamics in the second one. And in the first one it wasn't as bad as I guess I thought it was. I was probably kind of a, I dunno, critiquing myself too much during and I also noticed that I was pretty quiet in both of them like, I dunno, if it's the video recording but I could like barely hear what I was saying sometimes. I mean I know what I was saying but it didn't seem like I was speaking out enough, and there were only four people but in a bigger band setting I should probably work on projecting more.

10. In which excerpt did you sense the best pacing?

The best pacing was probably in the first one. I dunno, both times I ended early but, um, I dunno.

Investigator: What do you attribute ending early too?

I don't like to drill things longer than they need to be. And I felt like it was a good performance. I always get kind of frustrated when directors go on and on something and you're like, “It sounds good. Can we just move on?” So... I felt like it was good.

11. In which excerpt did the ensemble play the most?

The second one I would say, yeah.

12. Did your musical goals change from one conducting excerpt to the next?

Maybe a little, yeah. I was looking for more contrast and just more in the second one. Stretching the limits a little bit but it wasn't drastic.

13. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Yeah, I think so. Were they playing any mistakes? I didn't think so.

Final Interview
Conductor J (Control)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Uh, look through to see, um... well first of all just conducting-wise if I'm going to have to be careful. Key signature, time changes or something that I could cause them to completely fall apart if I don't do something correctly. Um, then look for, ya know, exposed entrances or long rests that I'm going to have to cue people for. I guess that's pretty much the first couple things.

Investigator: Is there anything else you can think of?

Well tempo I know, any changes... um, fermatas. Anything I need to change for speeding time.

2. How do you know when you are ready to conduct and rehearse a piece of music?

Well, this semester is a weird thing to base it on. Because it's been "Here's the score, go conduct it." In an ideal situation...

Investigator: Let's say for an ideal situation you've programmed for your own band and you've had an unlimited amount of time.

Sure. I don't think that's ever happened. Um, I don't know. I have a hard time hearing it just from looking at the score. So when I'm reading it with them, I'm reading it with me. So I don't necessarily feel like I need to have the whole score memorized before I conduct it for the first time. Which would kind of be how I would like it to because I don't like looking at the score, but at the same time I think its better if I just kind of learn it with them and they miss an entrance and I know, "Okay, next time I need to cue that." And we learn the piece together. So I mean knowing it well enough to know when those big changes happen would be good enough for conducting it the first time.

3. What are your most important goals when studying a score?

Um, that seems a lot like the first question. Um, goals okay, um, I guess on a, ya know, higher level to figure out why it's that way. Um, cause, ya know, I change things sometimes, ya know, like for the piece I'm doing now I'm making things staccato that aren't, but I think it sounds more, ya

know... If I'm score studying than I could realize if I'm singing it in my head and I want it to go a certain way I can figure out why they put slurs where they did rather than trying to duplicate what's written.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

4. What differences do you notice between these two conducting excerpts?

Sure, I was bouncing a lot in the first one. Um, I am sure I do that a lot at school, because basically the class I teach everyday is a concert band so they need a lot of encouragement. Um, and I think that took away from my ability to do anything else. Um, which is good to know. Uh, the second time I think I did a better job of transitions. Kind of study, ya know, breathing... Ya know, into the phrase rather than just the very first note. I think I also did more with my face for the soft part than I did the first one. I think the first time I didn't know where anything was. I remember being like "I didn't crescendo. Oh wait, that was the last measure." Or I was off by a measure, so I think I knew where things were the second time.

5. In which excerpt do you feel you conducted most confidently? Why?

The second time for sure. Um, I guess it was interesting that, ya know, the five minute study period kind of went on forever. Um, I mean I pretty much felt like I knew the whole thing after three and a half minutes and then was just kind of sitting there. But the first time I didn't know what was going on, ya know. I still missed where that crescendo was. Um, so I think maybe I paid more attention to those things the second time. So to be sure I knew where that was, how it fit with the melody, so I didn't miss it the second time.

6. Did the amount or frequency of your eye contact change between conducting excerpts? How?

I don't think so. I don't think I really looked at the score either time so...

7. Was your facial expression any different between the conducting excerpts? In what way(s)?

I think it changed a little bit more the second time. I think it was still kind of just the blank stare the first time even though I was trying not to. Um, I could tell my eyebrows moved and, um, I breathed a lot and I think now

that contributes to keeping my open face cause I'm thinking about doing more with them. I need to figure out how to be more expressive though, I'm not happy with myself with that.

8. In which excerpt did you feel you conducted the most expressively? Why?

Once again the second one. Obviously, just the end, they played the last three notes when I conducted them and we didn't do that the first time. Um, I just didn't look the same the whole time. The first time I was just bouncing the whole time. This time I actually did more things than just the same thing all the time.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

9. What differences do you notice between these two conducting excerpts?

I think I had more specific things to target the second time. I felt like I just had big chunks because I didn't have anything else to do the first time. Uh, and I would just run the whole thing and then stop and run the whole thing. The second time I would stop in the middle of phrases and point things out. Uh, I think it's just also in addition to being more comfortable with the music... being more comfortable with the setting.

10. In which excerpt did you sense the best pacing?

Um, the second. I think even though the first time I felt like, I well... I was just looking for things to do, so I was just standing there staring at the score and I don't think I really did that the second time.

11. In which excerpt did the ensemble play the most?

Um, I don't know, it's hard to say. I would guess the second one. We ended early the first time I remember. So I would say the second.

12. Did your musical goals change from one conducting excerpt to the next?

Uh, not ideally. I mean I think I was better at achieving them the second time, but the goals were mainly the same.

13. Did you find it easier to hear any perceived mistakes when you conducted the second time?

Um, I guess so because I don't... maybe that's another reason why I wasn't stopping. I found it easier to hear mistakes the second time than I remember hearing the first time. I did stop in the middle of things... clearly I was hearing things the second time.

Final Interview
Conductor K (Control)

1. When you are getting ready to conduct a new piece of music, how do you prepare?

Well, the first thing I do, obviously, is look at the time signature, key signature, tempo, what's my style. I'll look at the melody and kind of sing the melody in my head to get an idea, to get an even better idea of tempo and style. So for this one, you know, it said slow. Kind of look through and see if there are any big tempo changes and saw the lingering kind of section at the end. So, after I looked for that, I look at dynamics to see if there are any dynamic changes, who has the melody when. Just kind of sing through different parts and, for this one, I realized the motion and style was going to be driven by the melody. So I sang the melody to myself and kind of sang in my mind how I wanted the tempos to go and then I thought about how am I going to show this to them. And that's how I thought about that.

2. How do you know when you are ready to conduct and rehearse a piece of music?

I think it really has to do with how solid the concept of the piece is in my mind. How I want the melody to go, balance issues, style, you know, being able to have a clear picture in my mind when it is ready to go. And, I have exactly thought about I want this sort of sound from the French horn and trumpet, I want this kind of articulation from the trombone. I mean if I had time to sit down and work on the piece, that's how I would gauge it.

Investigator: And that is assuming you had as much time as you wanted?

Right.

3. What are your most important goals when studying a score?

Trying to figure out what I want the piece to say musically. The musical goals. Um, you know, what are the peaks, what are the valleys, ya know, what am I going to bring out that is going to make it a special moment kind of thing. Um, what makes it interesting, what makes it different. Those are the kind of things...that way when I get to it I can make eye contact with that person to get them to bring it out, or, or indicate with a gesture what I want to do. Because I think if you have an idea of what it sounds like, the gestures will come kind of naturally. Not something that is really rehearsed, I don't know.

"We are going to watch your conducting-only excerpts back to back. After we have viewed them, I am going to ask you a few questions."

4. What differences do you notice between these two conducting excerpts?

There is definitely more eye contact the second time. I think there was more musical intent with my left hand the second time. I mean, sometimes it was down, but when I wanted something I used it the second time. Um, I think my intentions with the tempo in the second half of the piece were much clearer the second time. I knew exactly what I wanted. I knew exactly what style I wanted. I knew what dynamic...the gesture got a little bit bigger and heavier. And, then, I think the tempo changes were a lot more steady and the ensemble knew exactly where to go. I think my communication at the beginning was a lot better and I looked at him and stayed with him a little bit more the second time. And, just overall, looking up at the ensemble and my facial expressions, I had facial expressions the first time, but the second time was definitely more but that may have had to do with the fact my hair was pulled back. So basically just more intention and clarity the second time.

5. In which excerpt do you feel you conducted most confidently? Why?

Definitely the second one. Because I have more of a clear idea of what I wanted to do and how I wanted to show it.

6. Did the amount or frequency of your eye contact change between conducting excerpts? How?

Yes.

Investigator: Okay. I'll just refer back to your previous comments for this one.

7. Was your facial expression any different between the conducting excerpts? In what way(s)?

Uh-huh.

8. In which excerpt did you feel you conducted the most expressively? Why?

Definitely the second one.

Investigator: Do you have some reasons for that?

Um, just because I think I had heard the piece and heard the players and just had a better idea. And, also, I heard this the second time and you heard my comments. They were definitely playing some things that I wasn't conducting, too because I noticed there was a mezzo piano and I didn't show it but it automatically got softer. I appreciated it but I wanted to make sure that you knew it was a reaction, something they were doing.

"We are going to watch your rehearsal excerpts back to back. After we have viewed them, I am going to ask you a few questions."

9. What differences do you notice between these two conducting excerpts?

Um, I think the main difference was I tried to convey a lot of my rehearsal thoughts the second time through gestures... dynamic changes, tempo changes. I noticed that since I had already worked with the group and even though I hadn't worked on it, I had some concept of how I wanted it to. I was able to show that more with gestures as far as tempo changes, dynamic changes.

Investigator: And less with the verbalizations? Do you believe that was one of the reasons you didn't feel the need to, uh, rehearse the group for the whole five minutes because you felt like you were getting from the gesture and there was no need to keep verbalizing the same stuff they were getting?

Right. I think the first time, a lot, I mean a lot of the things I was saying the first time was like tempo, dynamic, things like lining it up. And all of those things, are, can be taken care of through the conductor. Just making a bigger pattern, a clear pattern. Something like saying "watch me for tempo."

Investigator: Does that have to do with the group too?

Yeah. The group was advanced. They probably had most of it memorized. They were probably looking up more. I don't know if that is speculation, but just familiarity on both parts with the piece and I noticed they were doing everything I did. I noticed the tempo was quite a bit faster. But they followed it and it was clear and I think everything I wanted was clear. And, the first time, I mean I thought the rehearsal comments I made were valid and I think they were quick and it was quick feedback and also good

feedback and bad feedback. Um, I think it was an effective first rehearsal just not, uh, everything was conveyed gesturally the second time.

10. In which excerpt did you sense the best pacing?

I actually like the pacing of the first rehearsal. I thought it was an effective rehearsal. Everyone got a comment. Um, it was pretty quick. Everyone got to play. We got some good work done. And, uh, the pacing was good in the second one but as for actual rehearsing I thought the first one was the most effective.

11. In which excerpt did the ensemble play the most?

Um, it was about the same proportionally. I mean, they, they were playing a lot in both excerpts.

12. Did your musical goals change from one conducting excerpt to the next?

I think the goals were the same but about the only thing that changed was the tempo. As far as the crescendo and the style and the musical gesture, they were pretty much the same. And there was a part in the rehearsal excerpt that was actually my favorite repetition of the first rehearsal excerpt....gesturally of what I wanted the left hand phrase. It was like the last time we conducted it and I felt that was the most effective use. But I think the ideas were the same and the concept was the same.

13. Did you find it easier to hear any perceived mistakes when you conducted the second time?

I think so, um, like I said, I mean, it was little things like tempo and alignment and balance. And so, I was able to hear those just because I had the concept in my mind. And I think to kind of help with that because I didn't rehearse the first time, er, didn't rehearse as much the first time, I think even by the end of the first rehearsal I think there were little things I started to notice... alignment between the parts, alignment between the trombone and trumpet parts (sings the trumpet part). So, I think, just as it went on, I could, ya know, start going from macroscopic to microscopic as far as what I was listening for.

Appendix I

Conductor A (Score Study)

Session 1 Nonverbal

Not much eye contact
Unchanging facial expression
Unclear on tempo and transitions

Gestures are too contained
Phrase endings lack clarity

Some nice energy and gestures
Endings were unclear

Face does not match musical intent
Lost a little control when he wanted more from the ensemble

Session 2 Nonverbal

Head was out of the score
Pleasant face
Very musical gestures

Got my attention very well at measure four

Some nice gestures and expressive dynamics
Nice pattern and fluidity

Doesn't engage with us, even though he seems to engage with the music

Session 1 Rehearsal

Slow getting to his point
Unclear ideas that changed with every new start

Lots of "running" but not much evaluation
Looked over the ensemble, not at us

Good interpretation
Specific feedback

Good persistence
Not clear about his musical ideas sometimes

Session 2 Rehearsal

Good pacing; quick comments
Good ideas of what he wanted
He could sing some of the lines

Clearly knows and understands music and what he wants from it

Addressed some nice ideas but didn't have very many

No comments on intonation
Could work more pedagogy; makes comments and does not always follow-up

Conductor B
(Score Study)

Session 1 Nonverbal

Looked up and down a lot
Unclear gestures at times
Waited for us a couple of times

No expressive facial expressions
Did not impose her opinions on us

No clear starts
Little dynamic contrast

Does not engage performer

Session 2 Nonverbal

Pretty good eye contact
Not bad eye contact; could smile more
Musical gestures did not seem in time

Inconsistent gesture when she looked down

Great eye contact

Decent facial expressions
Smooth but sometimes stiff conducting pattern

Good job of bringing out horn and trombone at end of phrases
Rough start, good recovery
Can be more expressive and clear at measure 9

Session 1 Rehearsal

Not a lot to say
Mostly run-throughs
Not a clear idea of what she wants from the performers

Very engaging
Lots of broad comments; would like to hear more specifics

Did not play much during the rehearsal
Fixed some transitions

Limited vision of the music
Overly-interested in the tuba part at the expense of the other instruments

Session 2 Rehearsal

Always had a quick remark
Knew the music pretty well

Both expressed her musical decisions and was able to fine-tune the ensemble
Caught intonation and alignment issues

Addressed important and significant musical areas
Was not consistent with eye contact and ideas conveyed

Good idea of her pacing and balance
Verbal directives were not always clear
Provided higher standard for our performance

Conductor C
(Score Study)

Session 1 Nonverbal

Little eye contact
Bland, unchanging facial expression
Hard to read at tempo changes
Followed the ensemble at times

Changed mind while conducting
Seemed to be following us and not leading

More clarity with tempo changes
Very little eye contact

Good control of music (tempo and beat placement)
Demands our attention

Session 2 Nonverbal

Eyebrows up
Clean and expressive gestures

Conveyed her musical ideas which matched an “internal soundtrack”
Effective in leading us towards a musical performance

Smooth and relaxed pattern
Good eye contact and gestures
Good control of group at tempo fluctuations

Just doesn’t engage us or lead us to anything beautiful or special; otherwise, her conducting is clear enough

Session 1 Rehearsal

Had some good suggestions but was not clear at times
Only had one good musical idea

Quick feedback
Serious “conductor face” gets in the way sometimes

Not much eye contact

Size of pattern did not match what she wanted
More clarity with pick-ups needed
She suggests rather than demands what she wants

Session 2 Rehearsal

Quick pacing; always made nice comments
Nice musical comments

Gesture does not match clarity of verbal directives yet
She clearly knew what she wanted from all parts

She knew what she wanted but not took much and slowed down the pace
Good ideas but execution suffered

Good modeling
Had so much to say about musical direction
Needs to only give feedback if/when we are going to immediately rehearse

Conductor D
(Score Study)

Session 1 Nonverbal

No eye contact
No facial expression
Bland gesture
Unexpressive

“Stone face”
Steadiness of tempo was iffy

Large pattern but could be smaller at starts

Very plain facial expression
Conducting is too heavy

Session 2 Nonverbal

Did not look at the music too much, but looked away from us too
Very basic gestures; mostly clean

Not very compelling at beginning but was able to assert himself by the end

Nothing special, unique, or expressive

Knew music okay, but not well enough to lead
Doesn't connect well to the ensemble

Session 1 Rehearsal

Unclear why we are working on certain aspects of the music
Rehearsal ideas were inconsistent
Did not know what he wanted

Lots of talking followed by big chunks of music
Too many unneeded repetitions
No consistent tempo or style

Too much time addressing only two players
More ensemble playing

More consistency with verbal communication

Session 2 Rehearsal

Had some good things to say
Not very musical but has potential
Knew music pretty well

More awkward than slow
Huge improvement from last time

Had good ideas but rehearsed and organized them in an ineffective way

Tempo was not clear, especially at the end of phrases
Feedback was not specific enough

Conductor E (Score Study)

Session 1 Nonverbal

Inconsistent eye contact
Scared, unsure face throughout
Unclear and did not know what was happening at times

Too fixated on just one person
More facial expression needed

Pattern was too large for the music
Not a very smooth or flowing pattern

Looks very uncomfortable
Does not know the music
Conducting does not reflect the music

Session 2 Nonverbal

Unchanging face, but pleasant
Did not seem to have an idea of how to lead us to a good performance

Looked up but little communication
Feel like the gesture doesn't match her musical ideas

Not very smooth pattern
A little choppy with conducting
Not much eye contact, expression, or gesture

No connection with eyes
Baton skills are poor; too jagged and rough

Session 1 Rehearsal

Always had constructive comments
Sometimes random
Was not sure what she wanted

Disconnect between brain and arms
Gestures never seemed to match verbal comments

Addressed important aspects of performance
Maybe less isolated playing to save time

Good mix of individual and group performance
Slow pacing
Need more nonverbal cues

Session 2 Rehearsal

A lot of talking, but really good ideas
Music lacked a “big picture” feel

Clear ideas unclearly expressed
Still would not fix problems she recognized

Addressed ideas and problems efficiently and effectively
Seemed to know what she wanted quite clearly

Talks too fast
Has clear expectations

Conductor F
(Score Study)

Session 1 Nonverbal

Never looked at the people with solo pick-ups
Unchanging and bland facial expression
Unconfident of what she wanted

Very little to communicate

Did little to express the music

No technical mistakes but did not communicate any musical ideas

Session 2 Nonverbal

Looked down almost every measure
Unchanging face
Unclear gestures at times

Watched us without engaging our attention
Mostly kept time

Nice pattern
Little eye contact
Little expression but some with gestures

A little eye contact with the trumpet, but still seems distant from the ensemble

Does not seem comfortable with tempo

Session 1 Rehearsal

Little to say

Not very artistic, especially with the tempo

Did not know the music very well

Never demonstrated through gesture or singing what she wanted

Did not assert her musical ideas

Never fixed the shaky ending

Low expectations of the music

Needs to show more with gestures

Session 2 Rehearsal

Pretty slow and unsure

Not very musical

Knew music pretty well

Endearing, but very little actual constructive feedback

Focused only on transitions; never “dug into” the music

Really enjoyed the logical progression through the phrases

Addressed important things

Still does not have a command of the music or a comfort with what we are capable of

Pleasant, although uncomfortable, demeanor

Talked about phrases

Conductor 7

(Control)

Session 1 Nonverbal

Looked at the wrong people sometimes for pick-ups

Some facial expression fit the music at times

Has the potential to be very expressive

Made eye contact but it was not meaningful

Neutral face the entire time

Not very expressive conducting gestures
Not much dynamic or tempo fluctuation

Well-refined and controlled
Too stoic (face)

Session 2 Nonverbal

Minimal eye contact
Unchanging face

Nice legato, but not enough dynamic contrast
Head was up but eyes were distant and glazed
Mostly clear but showed little beyond time

Pattern a little large
Need more gestures but good control of group

Demanded more sound at measures 9 – 12, but was reacting instead of leading
Very stoic

Session 1 Rehearsal

Took too long to get to his point
Wanted to be musical but struggled with how to get us there

Most feedback was directed at himself
Disconnect between knowing what he wants and saying it

Could have addressed more expressive qualities in the music
Addressed important topics

Uncertain and hesitant
Positive and kind but too subdued

Session 2 Rehearsal

Not quite sure what he wanted
Surface comments
Kind of learning what he wanted as he went

Bad balance between playing and talk
Played long chunks as if listening for things to fix

Knew what he wanted and lead us there
Could be clearer with pick-ups

Good use of splitting up group, but needs to take better advantage of it
He isn't familiar enough with all of the lines

Conductor H
(Control)

Session 1 Nonverbal

Looked at the wrong people at cues
Pleasant face
Saw dynamic changes, but not tempo

Only looked at trombonist
No change in facial expression
Had no real musical ideas

Great eye contact with me
Nice relaxed pattern and style

Appeared calm and confident
Musical intent is unclear and bland

Session 2 Nonverbal

Kept head mostly out of score
Most unexpressive face
Nice legato pattern

Very distant

Relatively bland conducting but had nice, smooth style
Not much expression or gestures

Very easy to follow and comfortable, but doesn't lead us to anything musical or interesting

Session 1 Rehearsal

Good comments but too slow with delivery
Inconsistent musical ideas
Learning on the fly

Much better in rehearsal than when he conducted
Very subdued personality is reflected in his conducting
Most verbal feedback could have been shown with gesture

Good specific feedback
Knew what he wanted

Very poised and focused
Unclear of why certain groups were playing
Needs to commit to his musical ideas

Session 2 Rehearsal

Slow delivery
Not very informative information to give
Needed a better idea of what he wanted

Seemed dissatisfied but never explained or fixed those spots
Avoided fixing things when they were clearly never together or in tune

Almost too calm
No sense of urgency or passion in conducting
Didn't match what he said with conducting

Too many comments about dynamics – needs to show these things in conducting
Has us play in groups, but doesn't make constructive comments

Conductor I (Control)

Session 1 Nonverbal

No facial expression
Nice legato pattern
Little change in musicianship

Seemed confused about how to start the ensemble

Knew something was wrong but did not get involved

Much too fast for style
Not many dynamic gestures

Confused about pattern
Lacks confidence and conviction

Session 2 Nonverbal

Looked up and down a lot; didn't look at trumpet first
Pleasant facial expression
Pretty clean gestures

Clear idea of tempo
Not assertive about musical ideas

Still not much eye contact
No expression in the face

Looked mostly at tuba
Smooth and clear, but doesn't express musical intent

Session 1 Rehearsal

Did not have much to say
Could have offered a lot more expression suggestions
Very little eye contact

Too satisfied with our errors
Did not seem to like her tempo but did not change it
Lacks confidence

Low expectations for our performance
Needs to take more command

Could be clearer with starts and stops
More facial expressions

Session 2 Rehearsal

Pace was not too bad
Pretty good at leading us to accurate performance

Seemed like they knew the score

Entirely verbal; gestures alone would have impacted us
Feedback was reactionary rather than based on earlier decisions

Could have been pickier with dynamics and expressivity

Low standards for our tone and intonation
A little unclear with verbal instructions

Conductor J
(Control)

Session 1 Nonverbal

Not sure if she looked at us or past us
Very bland facial expression
Felt like she was following us and not leading
Unclear how she wanted us to play

Looked at us but did not connect
Not very much leadership

Not much of anything other than beating time

Too self-contained
Does not share musical intent with the ensemble

Session 2 Nonverbal

Looked up but not necessarily at us
Not bad facial expression; could smile more
Somewhat timid pattern
Did not take control of the ensemble

Very reserved but still communicative
Subtle gestures

Not confident with conducting
No gestures or expression

“pushes” with gesture equals not smooth but has a relaxed vibe that helped release some tension in our playing

Session 1 Rehearsal

Always had something to say but not very profound
Too many run-throughs
Unclear of what she wants

Too much playing without any specific goals
Did not clearly communicate any musical goals

She did not have a clear idea of what she wanted so she did not address much

Rehearsing for her and not the ensemble
Too indecisive

Session 2 Rehearsal

Lots of pointless run-throughs
Very tentative
Had some decent ideas

Seemed to be grasping at straws to figure out what to rehearse
Never addressed musical details
Recognized problems but was not active in solving them

Nice job of getting what she wanted eventually
Didn't get straight to the point

She is rehearsing herself more than us – show lack of familiarity
Feedback is pretty good and quick, but it's mostly low-hanging fruit

Conductor K (Control)

Session 1 Nonverbal

Pretty good eye contact; seemed like she was reacting at times
Same face throughout

m. 12 sort of subdivided then stopping moving entirely

Good confidence in gestures and dynamics
More clarity needed in transitions

Good leadership and poise
Provides good breaths

Session 2 Nonverbal

Almost never looks down
Somewhat excessive facial expression
Very clean, somewhat expressive gesture
Transitions were very clear

Gave us facial expression feedback while playing
Clear and easy to read
Knew what she wanted and when

Very smooth pattern at the beginning
Good facial expression going into measure 9
Nice control and subdivision of slow-downs

Comfortable and confident but not specific enough in her gestures
Clear pattern

Session 1 Rehearsal

Always had something to say

Too much complimenting led to a slower pace
Quick changes and improvements
Talked so quickly it was difficult to understand

Led us to a good performance with clear tempo changes and musicality

Positive demeanor
Clear expectations

Session 2 Rehearsal

Quick comments; knew what to say immediately

Playing to talk feedback was unbalanced
Really clear musical ideas

Good ideas and control of the ensemble
Great musical ideas that were conveyed to the ensemble

Talked too much
Didn't really know the music they were rehearsing
Good face, but doesn't fully invite ensemble
Intent is unclear in measures 9 - 11

Appendix J

Conductor A

(Score Study)

Second video shown first (V1)

Little slower	V1
Face more at ease	
Really looks like he is listening	
Gestures seem more specific to music	V1
More communication\feedback to group	V1
More expression in face and gestures	

Conductor B

(Score Study)

Second video shown second (V2)

seemed to be more expressive	V2
interpretation was more convincing	V2
more confident	V2
more expressive face	

Conductor C

(Score Study)

Second video shown second (V2)

Seemed to be listening more	V2
Smiled as if she was enjoying the music	
Interpretation was stronger in second video	V2
Subdivided measure to convey her musical ideas	V2
More technically proficient	

Conductor D
(Score Study)

Second video shown second (V2)

Seems more relaxed	V2
Little slower	
Not as forceful	
Could not tell	Undecided
Not sure	Undecided

Conductor E
(Score Study)

Second video shown second (V2)

Took more ritard at the phrase endings	V2
Tried to be more expressive	
More decisions about tempo and subdivision	V2
Gestures more appropriate	V2
Looked more at ease	

Conductor F
(Score Study)

Second video shown first (V1)

Went a little slower	V1
Looked up a little more	
Tried to effect more change (tempo)	V1
Made musical decisions	V1

Conductor G
(Control)

Second video shown second (V2)

Took more time with ends of phrases Better facial expression	V1
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Seemed more confident and relaxed Better eye contact	V2
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Better eye contact	V1
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Conductor H
(Control)

Second video shown second (V2)

Seemed to be listening more	V1
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Seems less concerned about technique Showed more dynamic change	V2
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Could not tell	Undecided
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Conductor I
(Control)

Second video shown first (V1)

Facial expression was better Slightly better eye contact	V2
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Seemed more aware of the accompaniment Showed more dynamic contrast	V2
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Looked more comfortable	V1
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Conductor J
(Control)

Second video shown second (V2)

Seemed much calmer and confident	V2
More confident eye contact	V1
More expressive gestures	V1

Conductor K
(Control)

Second video shown second (V2)

Better eye contact	V1
More facial expression	
Looked more comfortable	
Tried to show more shape of the line	V2
Second was expressive but not as together as the first	Undecided

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Vita

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